DENON

Ver. 1

SERVICE MANUAL

MODEL DN-D4000

DOUBLE CD PLAYER

注　意

サービスをおこなう前に、このサービスマニュアルを
必ずお読みください。本機は、火災、感電、けがなど
に対する安全性を確保するために、さまざまな配慮を
おこなっており、また法的には「電気用品安全法」に
もとづき、所定の許可を得て製造されております。
従ってサービスをおこなう際は、これらの安全性が維
持されるよう、このサービスマニュアルに記載されて
いる注意事項を必ずお守りください。

● 本機の仕様は性能改良のため、予告なく変更する
　 ことがあります。
● 補修用性能部品の保有期間は、製造打切後8年です。

● Please use this service manual with referring to the
operating instructions without fail.

● 修理の際は、必ず取扱説明書を参照の上、作業を
　 行ってください。

● Some illustrations using in this service manual are
slightly different from the actual set.

● 本文中に使用しているイラストは、説明の都合上
　 現物と多少異なる場合があります。

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SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

LASER RADIATION

Do not stare into beam or view directly with optical instruments, class 3A laser product.

注　意　サービス、点検時には次のことにご注意願います。

◉注意事項をお守りください！
サービスのとき特に注意を必要とする個所について
は、キャビネット、部品、シャーシなどにラベルや
捺印で、注意事項を表示しています。これらの注意
書きおよび取扱説明書などの注意事項を必ずお守り
ください。

◉感電に注意！
(1) このセットは、交流電圧が印加されていますの
で、通電時に内部金属部に触れると感電するこ
とがあります。従って通電サービス時には、絶
縁トランスの使用や手袋の着用、部品交換に
は、電源プラグを抜くなどして、感電にご注意
ください。
(2) 内部には、高電圧の部分がありますので、通電
時の取扱には、十分ご注意ください。

◉指定部品の使用！
セットの部品は難燃性や耐電圧など安全上の特性を
持ったものとなっています。従って交換部品は、使
用されていたものと同じ特性の部品を使用してくだ
さい。特に配線図、部品表に⚠印で指定されている
安全上重要な部品は必ず指定のものをご使用くださ
い。

◉部品の取付けや配線の引きまわしは、元どおりに！
安全上、テープやチューブなどの絶縁材料を使用し
たり、プリント基板から浮かして取付けた部品があ
ります。また内部配線は引きまわしやクランパーに
よって発熱部品や高圧部品に接近しないように配慮
されていますので、これらは必ず元どおりにしてく
ださい。

◉サービス後は安全点検を！
サービスのために取り外したねじ、部品、配線など
が元どおりになっているか、またサービスした個所
の周辺を劣化させてしまったところがないかなどを
点検し、外部金属端子部と、電源プラグの刃の間の
絶縁チェックをおこなうなど、安全性が確保されて
いることを確認してください。

（絶縁チェックの方法）
電源コンセントから電源プラグを抜き、アンテナ
や、プラグなどを外し、電源スイッチを入れま
す。500V絶縁抵抗計を用いて、電源プラグのそれ
ぞれの端子と、外部露出金属部〔アンテナ端子、
ヘッドホン端子、マイク端子、入力端子など〕と
の間で、絶縁抵抗値が1MΩ以上であること、この
値以下のときは、セットの点検修理が必要です。

注　意　安全上重要な部品について

本機に使用している多くの電気部品、および機構部品
は安全上、特別な特性を持っています。この特性はほ
とんどの場合、外観では判別つきにくく、また、もと
の部品より高い定格（定格電力、耐圧）を持ったもの
を使用しても安全性が維持されるとは、限りません。
安全上の特性を持った部品は、このサービスマニュア
ルの配線図、部品表につぎのように表示していますの
で、必ず指定されている部品番号のものを使用願いま
す。
(1)配線図… ⚠マークと黒色で薄く塗りつぶすこと
により表示しています。
(2)部品表… ⚠マークで表示しています。
指定された部品と異なるものを使用し
た場合には、感電、火災などの危険を
生じる恐れがあります。

DISASSEMBLY

(Follow the procedure below in reverse order when reassembling)

1. TOP COVER

(1) Remove 4 screws on the both sides, and 1 screw on rear side, then remove 1 upper screw.

(2) Pull up Top Cover.
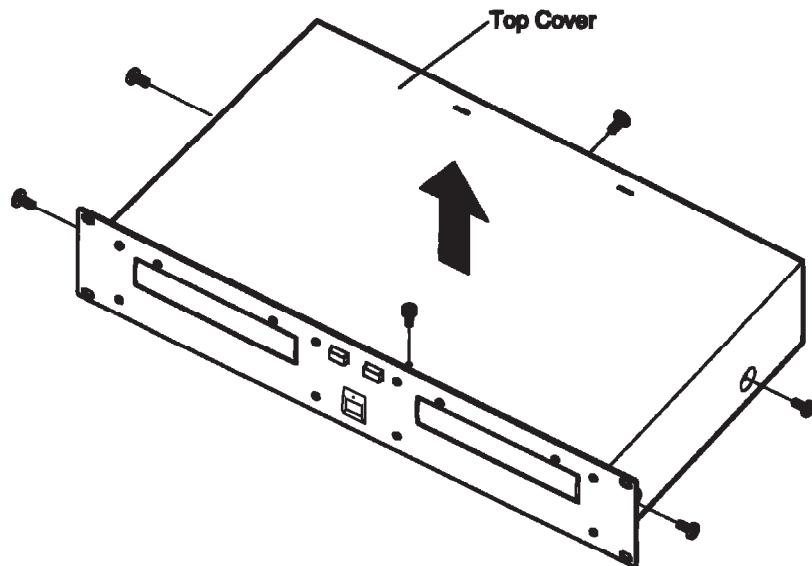
2. FRONT PANEL

(1) Detach 2 Blind Labels on the bottom chassis.

(2) Move CD Mecha Rack in the arrow direction through the label detached chassis opening. Loader Frame comes out.

(3) Pull up Loader Panel while pulling it towards front.

(4) Remove 2 upper screws and 3 lower screws, and 2 screws on both sides.

(5) Detach Front Panel.
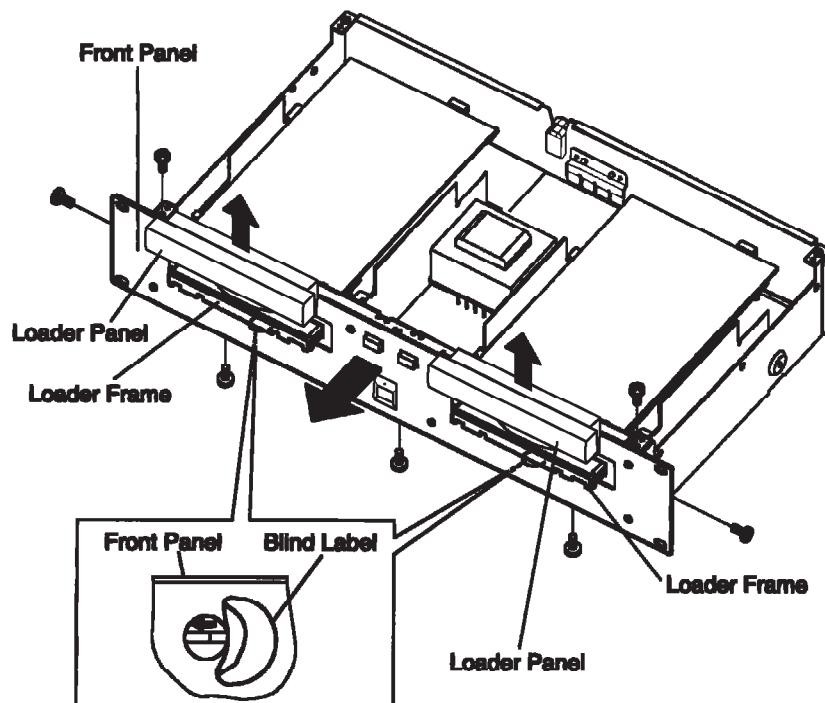
3. MECHANISM UNIT

(1)   Disconnect FFC cable.

(2)   Rrmove 8 lower screws

(3)   Remove 4 screws on rear side.

NOTES:

(a)   Do notpull out aslant to prevent the FFC cable from damage.

(b)   Do not fail to pull out AC cord from wall outlet befor disconnecting the FFCcable. If the ACcord is remained plugged into wall outlet, the power is kept supplied in the unit, which may cause danger.
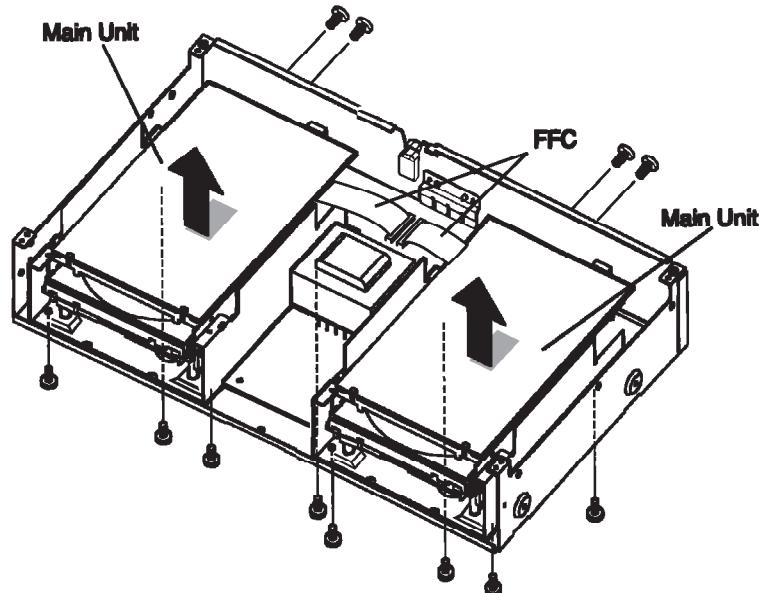
4. MAIN P.W.B.

(1)   Remove 4 screws.

(2)   Disconnect Connector.

(3)   Detach Main P.W.B.
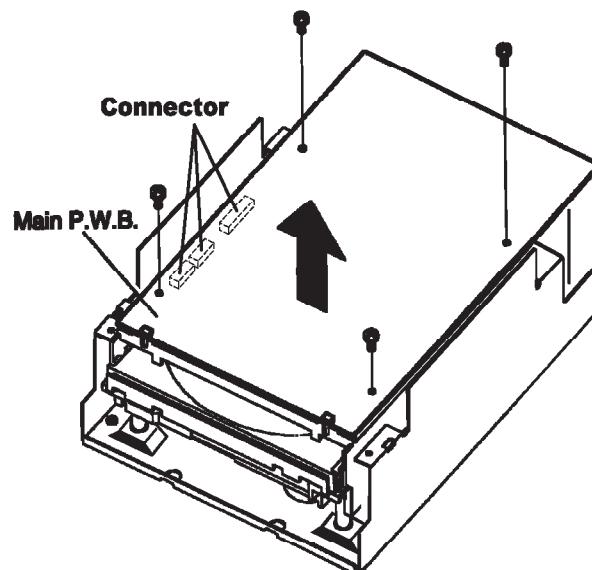
5. CD MECHA.

(1)   A gear is turned and a tray is opened.

(2)   Remove 4 upper screws.

(3)   Detach CD Mecha.

CD Mecha.

Gear
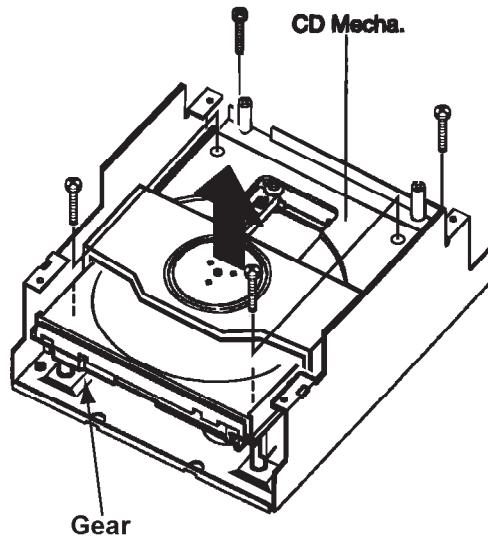
6. COVER (REMOTE CONTROL UNIT)

(1)   Remove 5 screws.

NOTE:

(a)   Remote Control Unit and its back panel are connected with cables, so pay attention when removing the back panel.

Remote Control Unit

BLOCK DIAGRAM

\<DN-D4000 DOUBLE CD PLAYER\>

\<DN-D4000 REMOTE CONTROLLER\>

PANEL UNIT 1

- KEY JOG SHUTTLE TR SEL
- KEY MATRIX BLOCK
- LED BLOCK
- LED CONTROL [BU3030F] IC302
- FLT [14-MT-35GN] FL601
- FL DRIVER [M66005FP] IC601
- PITCH SLIDE VR

REMOTE CPU UNIT

- REMOTE uCOM [TMP89CM47U] IC402
- [NJM79L05FA(S)] IC404
- RESET [PST600C] IC403
- [SN74AHCT08FW] IC302

-9V–HB F1,F2

8P MD CABLE

PANEL UNIT 2

MAIN UNIT 1

- DIG OUT 1
- PULSE TRANS
- 16M DRAM [MT1L16A4SA-50T] IC210
- 16M DRAM [MT1L16A4SA-50T] IC204
- VCO [TC9246F] IC114
- [NJM79L05AT] IC113
- [BU06 8F-V] IC113
- [TC74HCT7007AF] IC112
- ANA OUT 1
- FADER 1
- TR MUTE
- DAC [PCM1748E] IC206
- DIGITAL SERVO PROCESSOR [MN662711AC] IC201
- SYSTEM uCOM [MN102H0KDA] IC101
- DRIVER [AN8765SB] IC202
- HEAD AMP [AN2002A] IC203
- 8M FLASH MEMORY [MZ9W6000B70] IC111
- +9V-HB,F1,F2
- RC TXD,RC RXD
- [SN74AHCT08FW] IC302
- BSY , MBSY
- RESET [PST600C] IC301
- FADER 2
- DIG OUT 2
- ANA OUT 2

POWER UNIT

- +9VP
- +5VD
- +3.3VD
- +1.8V
- +5VA
- -5VA
- +5V REG
- +3.3V REG
- +1.8V REG
- +5V REG (AUDIO)
- -5V REG (AUDIO)
- -HB
- F2
- F1
- -HB REG
- POWER TRANS

CD MECHA UNIT 1

- LIMIT SW
- SLIDE MOTOR
- SPINDLE MOTOR
- LOADING MOTOR
- CLOSE SW
- OPEN SW
- FOCUS COIL
- TRACKING COIL
- MONITOR DIODE
- LASER DIODE
- DETECTOR

LEC1 UNIT

AC

MAIN UNIT 2

CD MECHA UNIT 2

LED2 UNIT

SERVICE PROGRAM

Required Measuring Implement

1. Reference disc (TCD784 or CO-74176)

1. What is Service Program

Service program is a special program intended for confirming servo functions etc.

2. Contents of Service Program

Switch on the power while pushing the CD1's PITCH BEND + button and CD2's OPEN/CLOSE button at the same time. After actuating the servo program, select an aiming process number with the SELECT knob, A1 button, or A3 button. Press the SELECT knob to execute the selected process, the process number is then displayed on the track indicator of the display. To exit from the service program, just switch off the power.

		Function (Character-display)	Contents
SELECT knob		μ com Version check (Version No.)	Check Version with JOG dial. 1. System μ com version No.: "SysVerXXXX" 2. RC μ com version No.: "RC_VerXXXX"
		Error Code Check (Error Data)	Turn the JOG dial to display the logging error codes in the occurred order. "ErrXX_E ✳ ✳ ✳" XX : occurred order E ✳ ✳ ✳ : error code 10 error logs are memorized at maximum. Kinds of Error Code, displayed Error Code Table Pressing SELECT knob enters to data erase mode. ("Err Clear?" is displayed.) If the SELECT knob is pushed again, the memorized error data are cleared.
		Total Running Time (Total_Time)	Total time span of servo function that counted by the hour is displayed. "R.Tim XXXXH" Note: No time is counted if disc tray is opened within 59 minutes. Pressing SELECT knob enters to data erase mode. ("Time Clear?" is displayed.) If the SELECT knob is pushed again, the memorized time data are cleared.
		Automatic Servo Adjustment call	Starts automatic servo adjustment when the SELECT knob is pushed, and after completing the adjustment, sort of the used disc is indicated. Data is selectable with the JOG dial. "Servo_Data" 1. Focus gain data 2. Focus balance data 3. Focus offset data 4. Tracking gain data 5. Tracking balance data 6. Tracking offset data

	Function (Character-display)	Contents
SELECT knob	Block Error Rate Check	Loading a disc by OPEN/CLOSE button. Press the PLAY/PAUSE button. B.E.R. is displayed. "E.Rate_XXX XXX : Block Error Rate You can select the track by the JOG DIAL.
	Servo Check	Starts automatic servo checking when the SELECT knob is pushed. Loading a disc by OPEN/CLOSE button. "Lchk_Open" : Disc Tray is opened. "Lchk_Wait" : During check. "Lchk_OK!!" : Disc Tray is opened. "LchkErr *** " : Error(E ***) is occurred.
	Illumination Check	All illuminations are lit. All illuminations can be turned off to push the SELECT knob. Press the SELECT knob again, all illuminations can be lit.

Adjustment Item	Adjustment Value indication at character portions.
Focus Gain	0576 ~ 2304
Focus Balance	-050 ~ +050
Focus Offset	-005 ~ +005
Tracking Gain	0392 ~ 1569
Tracking Balance	-025 ~ +025
Tracking Offset	-005 ~ +005

* Reference data.

3. TEST MODE

	Process No. (TRACK Indication)	Function (Character-display)	Contents
A1 button	-	Heat Run (H/R1Normal)	Starting with the PLAY/PAUSE button, it repeats open/close of the tray and playback. All tracks are played back if the track count is less than 20. Only the first and last tracks are played back if the tracks are more than 21. When any errors, it stops and indicates error code (see Error Code Table).
A2 button	-	Chucking Test (H/R2_Tray)	Starting with the PLAY/PAUSE button, it repeats open/close of the tray, servo on, and TOC read. The display shows the number of the tray operation. When any errors, it stops and indicates error code (see Error Code Table).

4. Error Code Table

Error Code	CONTENTS
E001	Unable to close the loader tray in the regulation time.
E002	Unable to open the loader tray in the regulation time.
E003	Inner circle switch ON error even if the time is over.
E004	Inner circle switch OFF error even if the time is over.
E005	The focus offset adjustment result is outside the regulation range.
E006	Unable to adjust the focus offset in the regulation time.
E007	The tracking offset adjustment result is outside the regulation range.
E008	Unable to adjust the tracking offset in the regulation time.
E009	The FE peak is outside the regulation range.
E00A	The FE peak is outside the regulation range.
E00B	Unable to adjust the focus rough gain in the regulation time.
E00C	The focus rough gain is outside the regulation range.
E00D	Unable to actuate focus in the regulation time.
E00E	Unable to actuate tracking in the regulation time.
E00F	Unable to adjust the tracking rough gain in the regulation time.
E010	The tracking rough gain is outside the regulation range.
E011	Unable to adjust the tracking balance in the regulation time.
E012	The tracking balance adjustment result is outside the regulation range.
E013	Focus servo down during automatic adjustment.
E014	Focus servo down during automatic adjustment.
E015	Unable to adjust the focus balance in the regulation time.
E016	The focus balance adjustment result is outside the regulation range.
E017	Track servo down during automatic adjustment.
E018	Unable to adjust the focus fine gain in the regulation time.
E019	The focus fine gain is outside the regulation range.
E01A	Unable to adjust the tracking fine gain in the regulation time.
E01B	The tracking fine gain is outside the regulation range.
E01C	Unable to adjust automatically in the regulation time.
E01D	Unable to read the subcode Q in the regulation time.
E01E	Unable to read the TOC in the regulation time.
E01F	Focus servo down during search (over the regulation time).
E020	Track servo down during search (over the regulation time).
E0216 *	Servo error during search.
E0213 *	Search error (over the regulation time).
E022	Discontinuity occurred, during write to the DRAM.
E023	The error which cannot be corrected to the read data.
E024	Unable to do the level detect.
E025	Unable to join data in the regulation time.
E026	The error rate when recording on the memory is over the regulation value.
E027	The subcode jump more than regulation.
E028	Servo error when power is turned on.
E029	Subcode Q error.
E030	Inter face error for both drives.

μ COM VERSION UPGRADE

System μcom can be upgraded in the following manner.

Version Upgrade Method

1.Record the version upgrade software on a CD-R or CD-RW disc,
   only as one file with the format ISO9660 Mode-1.
   The file name of the supplied version upgrade software should be used as is and this disc needs
   to finalize.

2.Hold the disc by the edges and place it on the disc tray.

3.Press the OPEN/CLOSE button to start the version upgrade.
   "Version Up"→**"Push Play!"** **"xxxx->XXXX"** are displayed.
                               xxxx : current version
                               XXXX : upgrade version

4.Press the PLAY/PAUSE button.
   "Now Writing" → **"Writing-XXX"** are displayed.
                               XXX : count up from 000 to161

5.When the version upgrade is finished, **"Complete!"** is indicated.

6.Turn off the power once and turn on again.
   Press the OPEN/CLOSE button and remove the disc.

NOTE: When the power is turned off before **"Complete!"** is displayed, μcom version is not written correctly.

SEMICONDUCTORS

● IC's

MN102H60KDA
(IC101)
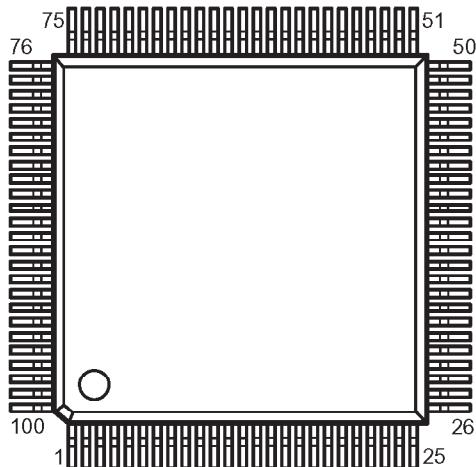
MN102H60KDA Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Res	Ini	Function
1	P60, WAIT, SBT2	PCDMUTE	O	-	Pd	L	L	Mute for analog 'L': Mute ON
2	P61, _RE	RD-	O	-	Pu	H	-	Read signal
3	P62, _WEL	WR-	O	-	Pu	H	-	Write signal
4	P63, _WE, _WEH	Reserved	O	-	-	Hi-Z	L	Not used.
5	_CS0,TM13OA	FLASHROMCS-	O	-	Pu	H	-	Chip select signal (MASK ROM operation : Input port)
6	_CS1, TM13OB	Reserved	O	-	-	Hi-Z	L	Not used.
7	_CS2, TM14OA	Reserved	O	-	-	Hi-Z	L	Not used.
8	_CS3, TM14OB	PLOAD	O	-	-	Hi-Z	H	OPEN/CLOSE signal (PWM out put) (During Pnrst= 'L', out put PWM(50%))
9	P54, _BREQ	Reserved	O	-	-	Hi-Z	L	Not used.
10	P55, _BRACK	Reserved	O	-	-	Hi-Z	L	Not used.
11	P56, ALE, _ALE, _BSTRE, TM15IA	MON2	I	-	-	Hi-Z	-	Monitor signal 2
12	P57,_WORD	WORD-	I	-	L	L	-	Data bit bus width select 'L': 16bit
13	P20,A00,SBT2	A00	A/O	-	-	Unfix	-	Address bus
14	P21,A01,SBI2	A01	A/O	-	-	Unfix	-	Address bus
15	P22,A02,SBO2	A02	A/O	-	-	Unfix	-	Address bus
16	P23,A03	A03	A/O	-	-	Unfix	-	Address bus
17	Vdd	Vdd	-	-	-	-	-	Power supply(+3.3V)
18	BOSC,BIBT1,BIBT2, PB0	Reserved	O	-	-	L	L	Not used.
19	Vss	Vss	-	-	-	-	-	GND(0V)
20	XI,PB1	PCE	O	-	Pd	L	L	Latch output
21	XO	XO	-	-	-	-	-	Not used. OPEN
22	Vdd	Vdd	-	-	-	-	-	Power supply(+3.3V)
23	OSCI	OSCI	I	-	-	-	-	Not used.
24	OSCO	OSCO	O	-	-	-	-	OSCI output
25	MODE	MODE	I	-	L	L	-	Mode select 'L': Processor mode

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Res	Ini	Function
26	P24,A04,TM15IA	A04	A/O	-	-	Unfix	-	Address bus
27	P25,A05	A05	A/O	-	-	Unfix	-	Address bus
28	P26,A06	A06	A/O	-	-	Unfix	-	Address bus
29	P27,A07	A07	A/O	-	-	Unfix	-	Address bus
30	P30,A08,_KI0	A08	A/O	-	-	Unfix	-	Address bus
31	P31,A09,_KI1	A09	A/O	-	-	Unfix	-	Address bus
32	P32,A10,_KI2	A10	A/O	-	-	Unfix	-	Address bus
33	P33,A11,_KI3	A11	A/O	-	-	Unfix	-	Address bus
34	AVDD	AVDD	-	-	-	-	-	Analog power supply terminal
35	P34,A12,_KI4	A12	A/O	-	-	Unfix	-	Address bus
36	P35,A13,_KI5	A13	A/O	-	-	Unfix	-	Address bus
37	P36,A14,_KI6	A14	A/O	-	-	Unfix	-	Address bus
38	P37,A15,_KI7	A15	A/O	-	-	Unfix	-	Address bus
39	P40,A16	A16	A/O	-	-	Unfix	-	Address bus
40	P41,A17	A17	A/O	-	-	Unfix	-	Address bus
41	P42,A18	A18	A/O	-	-	Unfix	-	Address bus
42	P43,A19	A19	A/O	-	-	Unfix	-	Address bus
43	Vref-	Vref-	-	-	-	-	-	Standard analog power supply
44	P44,AN4,A20	POPEN	I	-	-	Unfix	-	OPEN switch 'L': Switch ON
45	P45,AN5,A21	PCLOSE	I	-	-	Unfix	-	CLOSE switch 'L': Switch ON
46	P46,AN6,STOP,A22	PLIMITSW	I	-	-	Hi-Z	-	Inner circle SW 'L': Switch ON
47	P47,AN7,WDOUT, A23	PCDSEL	I	-	H/L	H/L	-	CD mecha select switch 'L': Mecha 1 / 'H': Mecha 2
48	P80,TM14OA	PEJECTSW	I	-	Pu	H	-	Eject switch 'L': Switch ON
49	P81,TM14OB	PTLED	O	-	Pd	L	L	Toray LED 'H': Light 1 / 'L': Turn Off
50	P82,TM0IO,SBI2, SBT3,SCL3	PDMUTE	O	-	Pu	H	H	Mute for digital 'H': Mute ON
51	P83,TM4IO,SBI3	RxD	I	-	Pu	H	-	Serial port (Receive) (76.8kbps 5V -> 3.3V)
52	P84,TM7IO,SBO3, SDA3	TxD	O	-	Pu	H	H	Serial port (Transmission) (76.8kbps , Use ATC function)
53	P85,TM9IOA,SBO2, SBT4,SCL4	PMD	O	-	Pu	L	L	DAC(PCM1748) control signal : Data
54	Vref+	Vref+	-	-	-	-	-	Standard analog power supply
55	P86,TM9IOB,SBI4	PMECHRxD	I	-	-	Hi-Z	-	Serial port (Receive)
56	P87,TM9IC,SBO4, SDA4	PMECHTxD	O	-	-	Hi-Z	H	Serial port (Transmission) (76.8kbps , Use ATC function)
57	P90,TM8IOA,BIBT1, _DMAREQ1	PMC	O	-	Pd	L	L	DAC(PCM1748) control signal : Clock
58	P91,TM10IOA, BIBT2,_DMAACK1	PML	O	-	Pd	L	L	DAC(PCM1748) control signal : Latch
59	P92,TM10IOB, _DMAREQ0	PLRCK	I	Ed	-	Hi-Z	-	LRCK : Use for time code creation during MP3 playback.
60	P93,TM10IC, _DMAACK0	PNRST	O	-	Pd	L	L	Round IC reset signal
61	Vss	Vss	-	-	-	-	-	GND(0V)
62	P94,AN0	PMBSYOUT	O	-	-	Hi-Z	H	Mechanism microcomputer Communication Busy signal output 'H':BUSY
63	P95,AN1	PMBSYIN	I	-	-	Hi-Z	-	Mechanism microcomputer Communication Busy signal input
64	P96,AN2	PRCBSYOUT	O	-	-	Hi-Z	H	Communication Busy signal output between RC and Mecha 'H':BUSY

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Res	Ini	Function
65	P97,AN3	PRCBSYIN	I	-	-	Hi-Z	-	Communication Busy signal input between RC and Mecha
66	Vdd	Vdd	-	-	-	-	-	Power supply(+3.3V)
67	P70,SBT0,_RAS	PMCLK	O	-	-	Hi-Z	H	DSP interface Clock (clock synchronous formula)
68	P71,SBI0,_CAS,_LCAS	PSTAT	I	-	-	Hi-Z	-	DSP interface Reception (clock synchronous formula)
69	P72,SBO0,_UCAS	PMDAT	O	-	-	Hi-Z	H	DSP interface Transmission (clock synchronous formula)
70	P73,SBT1,DUMX	PTXTCLK	O	-	-	Hi-Z	H	Use during CD-TEXT data read (clock synchronous formula)
71	P74,SBI1	PTXTD	I	-	-	Hi-Z	-	Use during CD-TEXT data read (clock synchronous formula)
72	P75,SBO1	PMLD	O	-	-	Hi-Z	H	DSP interface latch
73	TEST1	TEST1	I	-	Pu	-	-	Pull up 33 - 50K
74	TEST2	TEST2	I	-	Pu	-	-	Pull up 33 - 50K
75	_NMI	_NMI	I	Lv	Pu	H	-	Need to pull up
76	PA0,_IRQ0	PBLKCK	I	Ed	-	Hi-Z	-	Sub code clock interruption
77	PA1,_IRQ1	PDQSY	I	Ed	-	Hi-Z	-	CD-TEXT DQSY Interruption
78	PA2,_IRQ2	PFADECUE	I	-	Pu	H	-	Fader signal input (CUE) 'L' : Input YES
79	PA3,_IRQ3	PFADER ST	I	-	Pu	H	-	Fader signal input (PLAY) 'L' : Input YES
80	PA4,_IRQ4,TM15IB	PCHGOFT	O	-	Pu	H	L	Off track signal
81	PA5,ADSEP	ADSEP	I	-	H	H	H	H': Address data separation mode / 'L': Address data common mode
82	_RST	RST-	I	Lv	-	L	-	Reset signal 'L': RESET
83	Vdd	Vdd	-	-	-	-	-	Power supply(+3.3V)
84	P00,D00,AD00	D00	D/O	-	-	Hi-Z	-	Data bus
85	P01,D01,AD01	D01	D/O	-	-	Hi-Z	-	Data bus
86	P02,D02,AD02	D02	D/O	-	-	Hi-Z	-	Data bus
87	P03,D03,AD03	D03	D/O	-	-	Hi-Z	-	Data bus
88	P04,D04,AD04	D04	D/O	-	-	Hi-Z	-	Data bus
89	P05,D05,AD05	D05	D/O	-	-	Hi-Z	-	Data bus
90	P06,D06,AD06	D06	D/O	-	-	Hi-Z	-	Data bus
91	P07,D07,AD07	D07	D/O	-	-	Hi-Z	-	Data bus
92	Vss	Vss	-	-	-	-	-	GND(0V)
93	P010,D08,AD08,TM8IOB	D08	D/O	-	-	Hi-Z	-	Data bus
94	P011,D09,AD09,TM8IC	D09	D/O	-	-	Hi-Z	-	Data bus
95	P012,D10,AD10,TM11IOA	D10	D/O	-	-	Hi-Z	-	Data bus
96	P013,D11,AD11,TM11IOB	D11	D/O	-	-	Hi-Z	-	Data bus
97	P014,D12,AD12,TM11IC	D12	D/O	-	-	Hi-Z	-	Data bus
98	P015,D13,AD13,TM12IOA	D13	D/O	-	-	Hi-Z	-	Data bus
99	P016,D14,AD14,TM12IOB	D14	D/O	-	-	Hi-Z	-	Data bus
100	P017,D15,AD15,TM12IC	D15	D/O	-	-	Hi-Z	-	Data bus

**MN6627911AC
(IC201)**
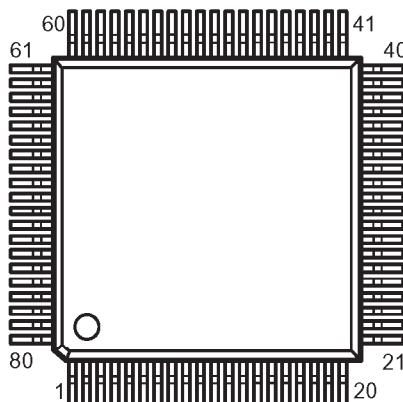
MN6627911AC Terminal Function

Pin No.	Pin Name	I/O	Function
1	DRVDD	I	Power supply for DRAM interface (Pin No.2 - 18, 80)
2	D0	I/O	Data I/O signal 0 for DRAM
3	D1	I/O	Data I/O signal 1 for DRAM
4	WE	O	Write enable signal for DRAM
5	RAS	O	RAS control signal for DRAM
6	D2	I/O	Data I/O signal 2 for DRAM
7	D3	I/O	Data I/O signal 3 for DRAM
8	CAS	O	CAS control signal 0 for DRAM
9	A10	O	Address signal 10 for DRAM
10	A8	O	Address signal 8 for DRAM
11	A7	O	Address signal 7 for DRAM
12	A6	O	Address signal 6 for DRAM
13	A5	O	Address signal 5 for DRAM
14	A4	O	Address signal 4 for DRAM
15	A9	O	Address signal 9 for DRAM
16	A0	O	Address signal 0 for DRAM
17	A1	O	Address signal 1 for DRAM
18	A2	O	Address signal 2 for DRAM
19	A3	O	Address signal 3 for DRAM
20	DVSS2	I	GND for digital
21	DVDD2	I	Power supply for digital
22	SPOUT	O	Spindle motor drive signal
23	TRVP	O	Traverse drive signal
24	TRVM	O	Not used
25	TRP	O	Tracking drive
26	GCNTL	O	Gain control signal for CD-RW
27	FOP	O	Focus drive
28	CHGICO	O	EQ select signal
29	IOVDD1	I	Power supply for IO
30	TBAL	O	Tracking balance adjust
31	FBAL	O	Focus balance adjust
32	FE	I	Focus error signal (Analog input)
33	TE	I	Tracking error signal (Analog input)
34	RFENV	I	RF envelope signal (Analog input)
35	OFT	I	Off track signal H : OFF TRACK
36	NRFDET	I	RF detect signal H : DETECT
37	BDO	I	Drop out signal H : DROP OUT
38	LDON	O	Laser ON signal H : ON
39	ARF	I	RF signal
40	IREF	I	Standard current input terminal
41	ADPVCC	I	Voltage for power supply monitor

Pin No.	Pin Name	I/O	Function
42	DSLF	O	Loop filter for DSL
43	RFSW	I	Loop filter for DSL
44	PLLF	O	Loop filter for PLL
45	PLLFO	O	Loop filter for PLL
46	AVDD2	I	Power supply for analog (DSL, PLL, AD)
47	AVSS2	I	GND for analog (DSL, PLL, AD)
48	OUTL	O	Not used
49	AVSS1	I	GND for analog (Audio output)
50	OUTR	O	Not used
51	AVDD1	I	Power supply for analog (Audio output)
52	DVSS3	I	GND for digital
53	DVDD3	I	Power supply for digital
54	TMOD2	I	Test terminal L : Normal
55	MON2	O	Serial monitor signal 2
56	BCLK	O	Bit clock for serial data
57	SRDATA	O	Serial data signal
58	LRCK	O	L, R discernment signal
59	IOVDD2	I	Power supply for IO
60	TX	O	Digital audio interface signal
61	MCLK	I	ucon command clock signal
62	MDATA	I	ucon command data signal
63	MLD	I	ucon command load signal L : LOAD
64	BLKCK	O	Sub code block clock signal (f=75Hz : Normal speed playback)
65	PWMSEL	I	PWM output mode select L : Direct H : 3 values
66	SMCK	O	Not used
67	SBCK	I	Not used
68	STAT	O	Status signal
69	NRST	I	Reset L : RESET
70	SPPOL	O	Not used
71	PMCK	O	Not used
72	DQSY	O	Pack signal for CD TEXT data
73	TXTD	O	CD TEXT data signal
74	TXTCK	O	Ext. clock signal input for CD TEXT resister
75	NTEST	I	Test terminal H : Normal
76	X2	O	Not used
77	X1	I	16.9344MHz input terminal
78	DVSS1	I	GND for digital
79	DVDD1	I	Power supply for digital
80	MON1	O	Serial monitor signal

TMP86CM47U (RC: IC102, 202)
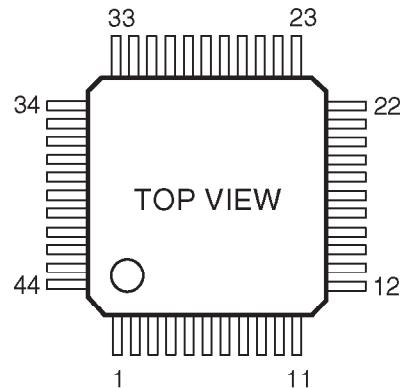
TMP86CM47U Terminal Function

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Res	Ini	Function
1	VSS	VSS	-	-	-	-	-	GND (0V)
2	XIN	XIN	I	-	-	-	-	Oscillation input
3	XOUT	XOUT	O	-	-	-	-	Oscillation output
4	TEST	TEST	I	-	-	-	-	Fixed to L
5	VDD	VDD	-	-	-	-	-	Power (+5.0V)
6	P21	LCLK1	O	-	Pu	H	L	CD1:BU2090F-CLK
7	P22	LCLK2	O	-	Pu	H	L	CD2:BU2090F-CLK
8	/RST	/RST	I	-	-	-	-	ucon reset
9	P20	/FLRST	O	-	Pd	H	L	CD1/2:M66005FP-/RST
10	P00	NC	I	-	-	Hi-Z	-	
11	P01	NC	I	-	-	Hi-Z	-	
12	RXD	RXD	I	-	-	H		Data receive from main unit
13	TXD	TXD	O	-	-	H	H	Data send to main unit
14	P04	DATA	O	-	Pu	H	H	CD1/2:M66005FP-DATA & BU2090F-DATA
15	P05	NC	I	-	-	Hi-Z	-	
16	P06	FLCLK	O	-	Pu	H	H	CD1/2:M66005FP-CLK
17	P07	NC	I	-	-	Hi-Z	-	
18	P17	/FLCS2	O	-	Pu	H	H	CD2:M66005FP-/CS
19	P16	/FLCS1	O	-	Pu	H	H	CD1:M66005FP-/CS
20	P15	/KEYOUT5	O	-	Pu	H	H	Key scan signal 5
21	P14	/KEYOUT4	O	-	Pu	H	H	Key scan signal 4
22	P13	/KEYOUT3	O	-	Pu	H	H	Key scan signal 3
23	P12	/KEYOUT2	O	-	Pu	H	H	Key scan signal 2
24	P11	/KEYOUT1	O	-	Pu	H	H	Key scan signal 1
25	P10	/KEYOUT0	O	-	Pu	H	H	Key scan signal 0
26	AIN0	PIT1	A/I	-	-	-	-	CD1: Pitch input
27	AIN1	PITC1	A/I	-	-	-	-	CD1: Pitch center value signal
28	AIN2	PIT2	A/I	-	-	-	-	CD2: Pitch input
29	AIN3	PITC2	A/I	-	-	-	-	CD2: Pitch center value signal
30	P34	JOG10	I	-	Pu	-	H	CD1: JOG
31	P35	JOG11	I	-	Pu	-	H	CD1: JOG
32	P36	JOG20	I	-	Pu	-	H	CD2: JOG
33	P37	JOG21	I	-	Pu	-	H	CD2: JOG

Pin No.	Pin Name	Symbol	I/O	DET	Ext	Res	Ini	Function
34	VAREF	5V	I	-	-	-	-	Power (+5.0V), Analog ref.V for A/D conversion
35	AVDD	5V	I	-	-	-	-	Power (+5.0V), for A/D conversion circuit only
36	AVSS	0V	I	-	-	-	-	GND (0V), Analog GND for A/D conversion
37	P40	/KEYIN0	I	-	Pu	-	H	CD1: Key scan input 0
38	P41	/KEYIN1	I	-	Pu	-	H	CD1: Key scan input 1
39	P42	/KEYIN2	I	-	Pu	-	H	CD1: Key scan input 2
40	P43	/KEYIN3	I	-	Pu	-	H	CD1: Key scan input 3
41	P44	/KEYIN4	I	-	Pu	-	H	CD2: Key scan input 0
42	P45	/KEYIN5	I	-	Pu	-	H	CD2: Key scan input 2
43	P46	/KEYIN6	I	-	Pu	-	H	CD2: Key scan input 3
44	P47	/KEYIN7	I	-	Pu	-	H	CD2: Key scan input 3

AN8785SB
(IC202)

L: All mute
Hiz: ch2,4 ON
H: Active

[Others]
[Loading]   [Traverse]   [Spindle]   [Focus]   [Tracking]

Standby PVcc2 D2- D2+ D4- D4+ D3- D3+ PVcc3 D1- D1+ D5- D5+ PVcc1

(M) (M) (M)

(16) (10) (12) (11) (18) (17) (14) (13) (19) (1) (28) (26) (25) (24)

Protection
Circuit

Standby
Band-gap
Vcc/Vref
Reser Circuit

1.25V

(4) IN
(5) IN+
(3) OUT

switch

(6) Vref

(7) IN2+   (9) (8)   (21) (15) (20)   (23) (27) (2) (22)

0.1µ   (2.5V)   ch.4 SW

IN2- H:2.5V
      L or :Vref
      HIZ

IN4 PGnd2 IN3   IN1 PGnd1 IN5   SVcc SGnd-Fin

AN22002A
(IC203)

CAGC ARF CBD0 BD0 C0FTR 0FTR

RFN (4) (5) (6) (7) (8) (11) (12) (13) (14)

RFOUT   RFIN
RF_EQ   AGC   BD0   0FTR

(9) CEA

NRFDET   3TENV   (10)
                          3TOUT

A
+
C   A (32) AMP GCA BCA   (15) NRFDET
                                                    (22) FEN
C (31)   SUB
B
+   B (30) AMP GCA BCA   (23) FEOUT
D
D (29)
                                                    (21) TEN
F
E (27) AMP GCA BCA   SUB   (20) TEOUT
E
F (28) AMP GCA BCA

                                    TEBPF (19)
                          VDET
VREF   (18) VDET
(17)

                          LD   (2)

                          PD   (1)

(24) (26) (25) (16) (3)
GCTL TBAL FBAL GND VCC

BU2618FV (IC113)

M66005FP (IC601)
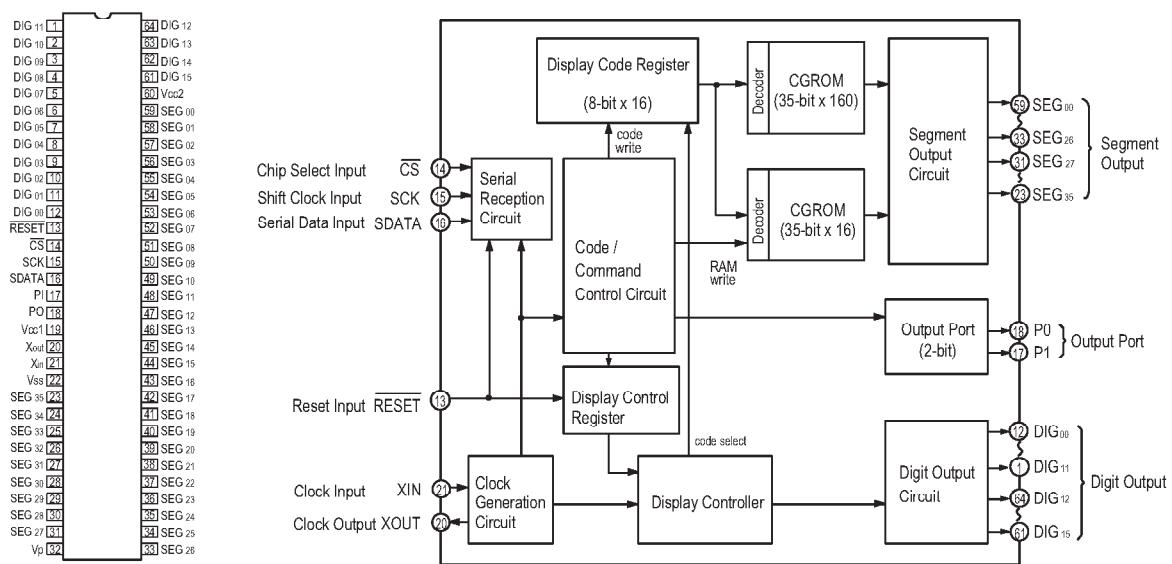
M66005FP Terminal Function

Symbol	Name	Function
RESET	Reset Input	Initialzes internal state of M66005.
CS	Chip Select Input	Able to communicate with MCU in "L" mode. Command from MCU will be disregareded in "H" mode.
SCK	Shift Clock Input	Shifts input data at rise from "L" to "H".
SDATA	Serial Data Input	Inputs character code or command data needed to display from MSB.
X_{IN}	Clock Input	Sets oscillation frquency by connecting external resistor and capacitor (maximum oscillation frequency fosc (max)=1MHz). Also feasible to apply external clock. In this case, inject external clock to Xin terminal and open Xout terminal.
X_{OUT}	Clock Output	
DIG 00~ DIG 15	Digit Output	Connect to digit terminal of VFD. DIG00~DIG15 correspond to the 1st figure to 16th figure respectively.
SEG 00~ SEG 35	Segment Output	Connect to segment terminal of VFD. For corresponding SEG00~SEG35 to segment terminal of VFD, refer to the figure right.
P0, P1		Output port (static operation).
V_{CC1}		Positive power supply terminal for internal logic.
V_{CC2}		Positive power supply terminal for high tension output port.
V_{SS}		GND terminal.
V_p		Negative power supply terminal for VFD drive.

(Forwarding connection of segment output terminal.)

☐ in the right figure indicates 1 dot of segment, the figure in ☐ shows the segment output terminal number (00~35) to be connected.

00	01	02	03	04
05	06	07	08	09
10	11	12	13	14
15	16	17	18	19
20	21	22	23	24
25	26	27	28	29
30	31	32	33	34

35

TC9246F (IC114)
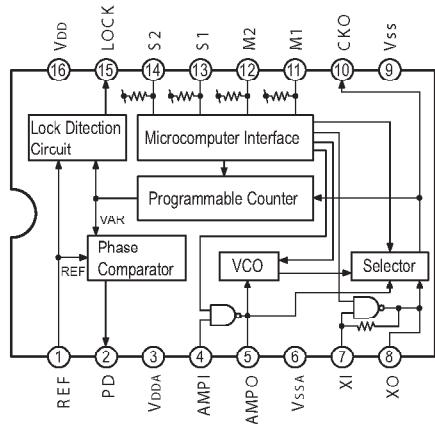
BU2090F (IC602)

PCM1748 (IC206)

| Pin	Name	Pin	Name
1	BCK	16	SCK
2	DATA	15	ML
3	LRCK	14	MC
4	DGND	13	MD
5	V_{DD}	12	ZEROL/NA
6	V_{CC}	11	ZEROR/ZEROA
7	$V_{OUT}L$	10	V_{COM}
8	$V_{OUT}R$	9	ACND
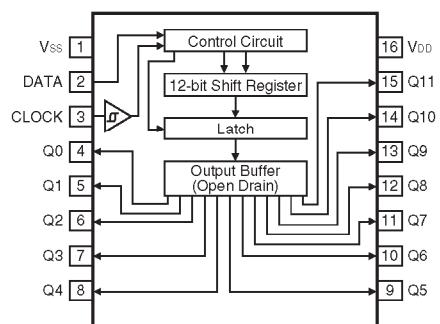
PCM1748
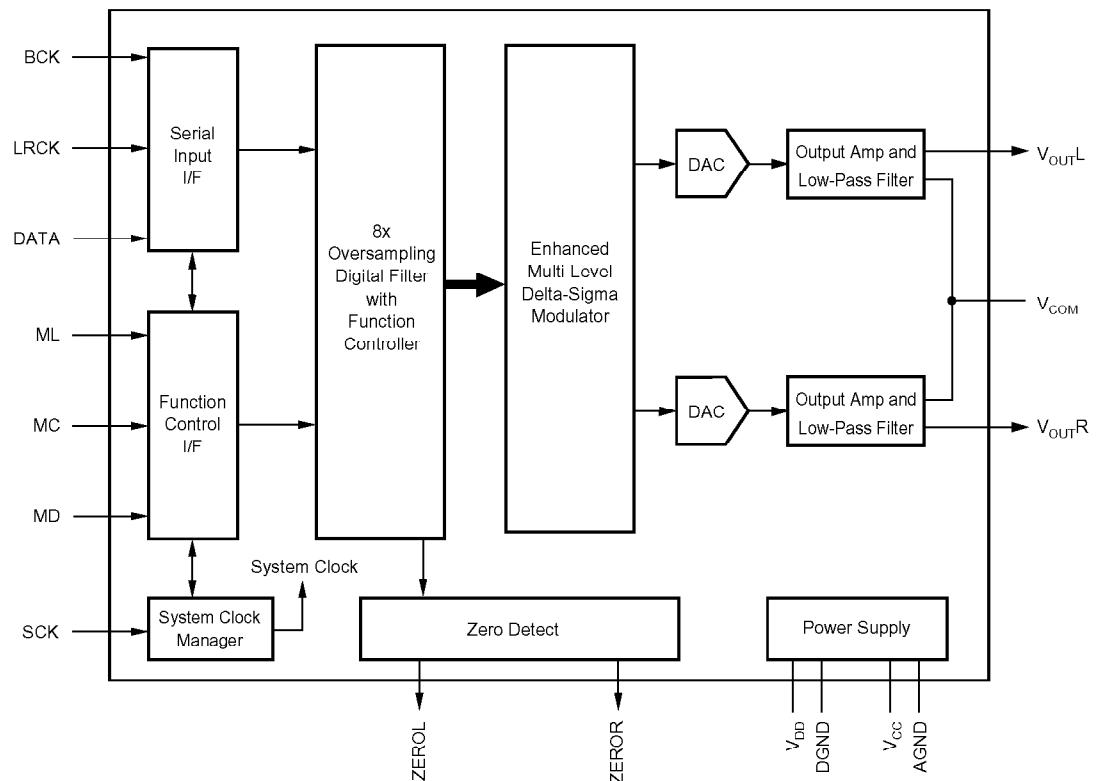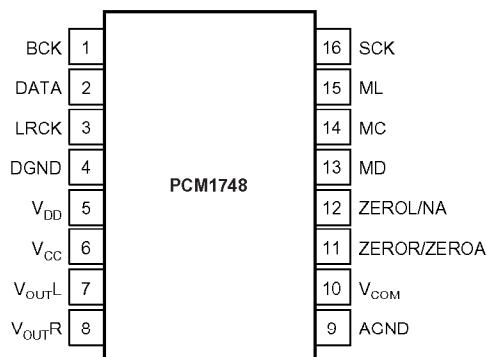
● **TRANSISTORS**

DTA114EK
DTC114EK
DTC114YK
DTC143EK

DTA114EK

PNP Type

	R1	R2
DTA114EK	10kohm	10kohm
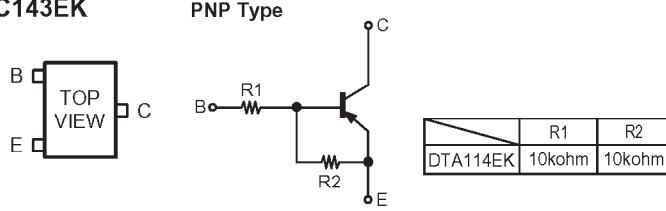
DTC114EK
DTC114YK
DTC143EK

NPN Type

	R1	R2
DTC114EK	10kohm	10kohm
DTC114YK	10kohm	47kohm
DTC143EK	4.7kohm	4.7kohm

22
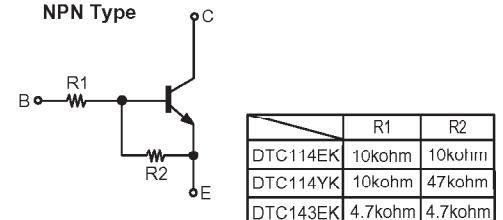
FL DISPLAY
14-MT-35GN (FL601)
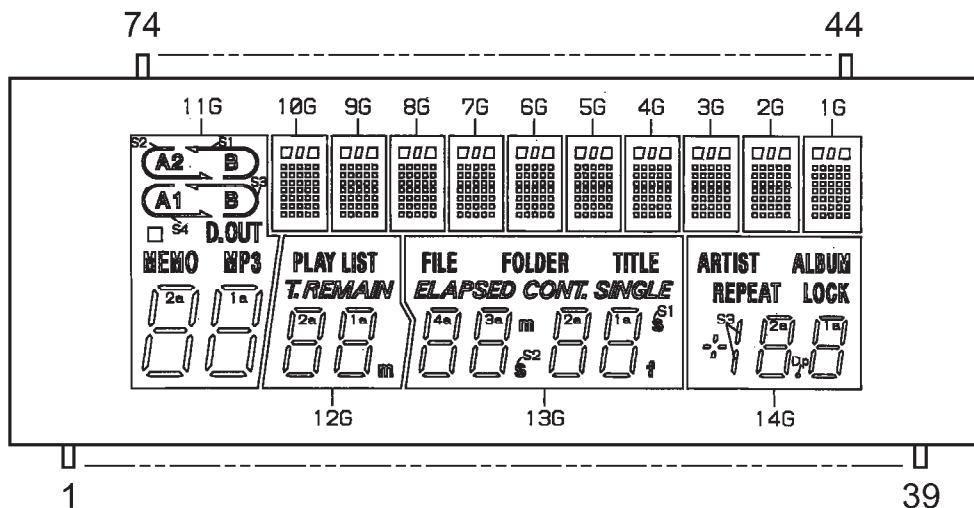
Pin Connection

Pin No.	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40
Connection	NP	NP	NP	NP	IC	NC	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NC	NC	NC	NC	NC	NC	NC	NC	NC	P36	P35	P34	P33	P32	P31	P30	P29	P28	NP	NP	NP

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39
Connection	F1	F1	NP	NP	13G	14G	P37	P38	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26	P27	NP	NP	F2	F2

NOTE: 1) F1, F2 ········· Filament   2) NP ········· No Pin   3) DL ········· Datum Line   4) 1G~14G ········· Grid
5) IC ········· Internal Connection   6) NC ········· No Connection

Segment Designation
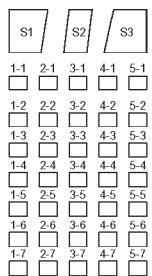
(10G~1G)
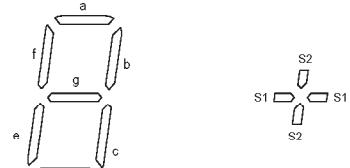
(11G~14G)

(14G)

Anode Connection

	14G	13G	12G	11G	10G~1G
P1	S1	1d	1d	1d	1-1
P2	S2	1e	1e	1e	2-1
P3	S3	1c	1c	1c	3-1
P4	1d	1g	1g	1g	4-1
P5	1e	1f	1f	1f	5-1
P6	1c	1b	1b	1b	1-2
P7	1g	1a	1a	1a	2-2
P8	1f	2d	2d	2d	3-2
P9	1b	2e	2e	2e	4-2
P10	1a	2c	2c	2c	5-2
P11	Dp	2g	2g	2g	1-3
P12	2d	2f	2f	2f	2-3
P13	2e	2b	2b	2b	3-3
P14	2c	2a	2a	2a	4-3
P15	2g	ⓜ	ⓜ	MEMO	5-3
P16	2f	S2	PLAY LIST	MP3	1-4
P17	2b	3d	T.	□	2-4
P18	2a	3e	REMAIN	D.OUT	3-4
P19	ARTIST	3c	—	A1	4-4
P20	ALBUM	3g	—	S4	5-4
P21	REPEAT	3f	—	B	1-5
P22	LOCK	3b	—	S3	2-5
P23	—	3a	—	A2	3-5
P24	—	4d	—	S2	4-5
P25	—	4e	—	B	5-5
P26	—	4c	—	S1	1-6
P27	—	4g	—	—	2-6
P28	—	4f	—	—	3-6
P29	—	4b	—	—	4-6
P30	—	4a	—	—	5-6
P31	—	S1	—	—	1-7
P32	—	f	—	—	2-7
P33	—	FILE	—	—	3-7
P34	—	FOLDER	—	—	4-7
P35	—	TITLE	—	—	5-7
P36	—	ELAPSED	—	—	S1
P37	—	CONT.	—	—	S2
P38	—	SINGLE	—	—	S3

PRINTED WIRING BOARDS
GU-3523 DRIVE P.W.B. UNIT
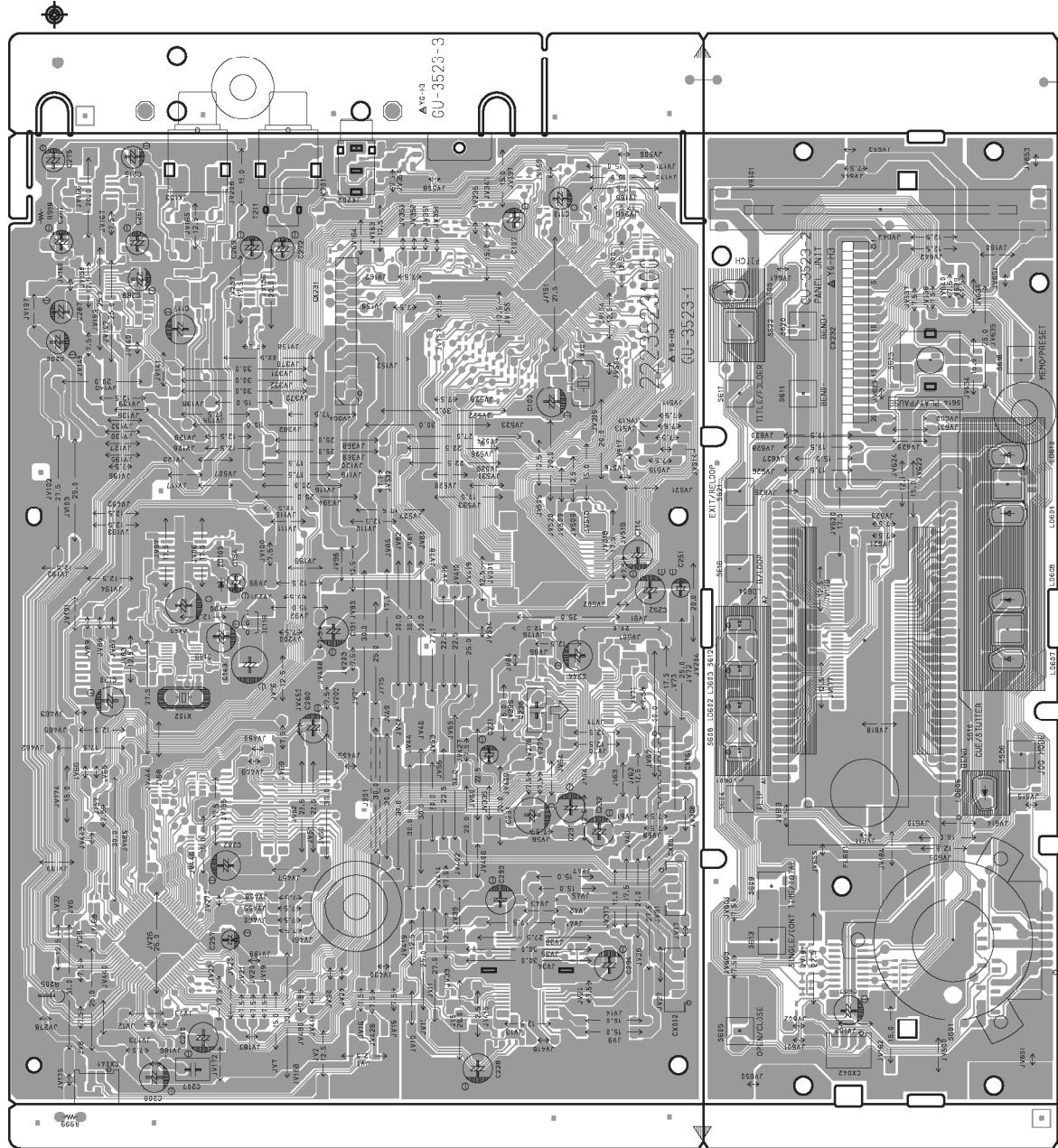
COMPONENT SIDE

FOIL SIDE
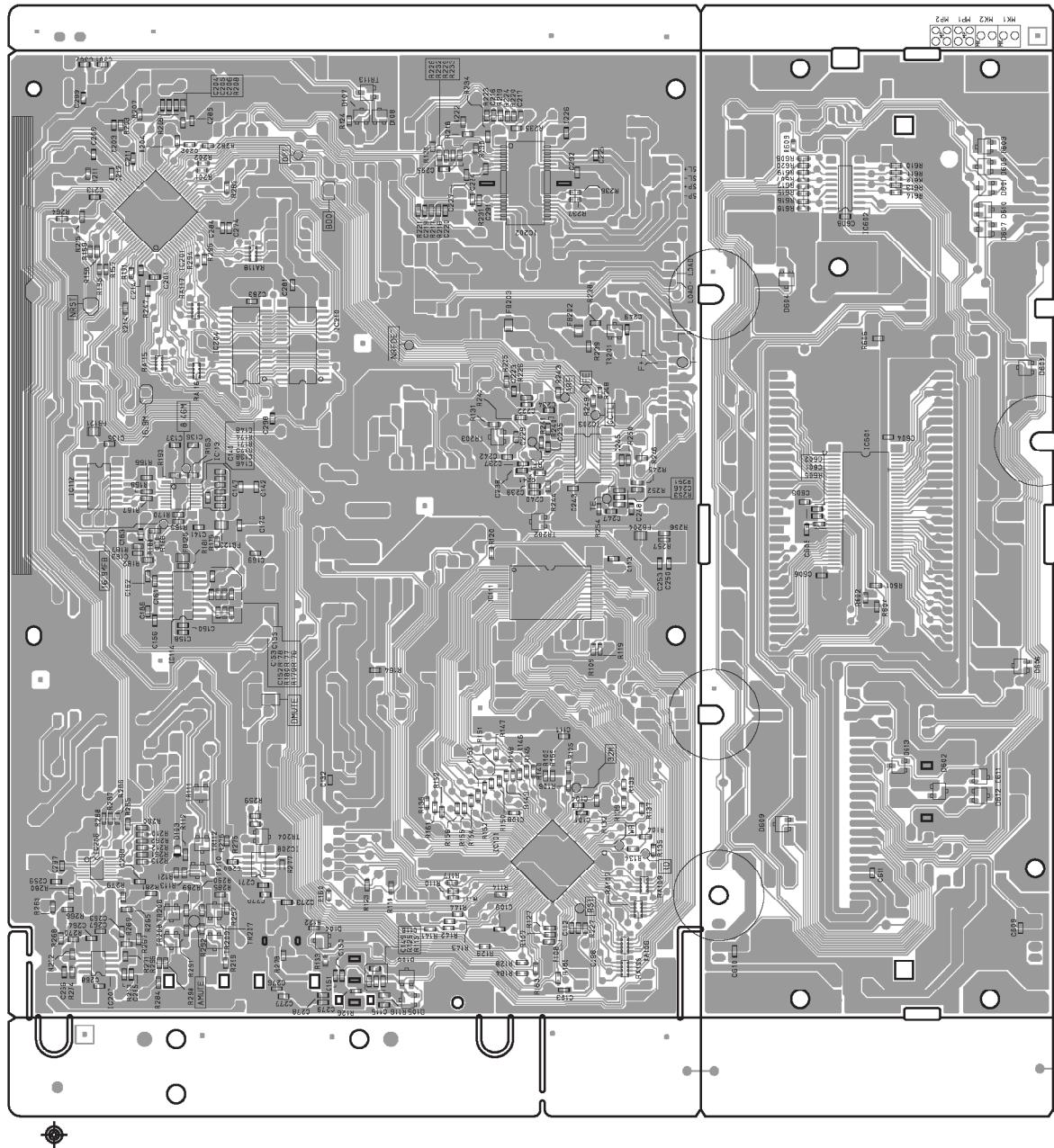
POWER SUPPLY UNIT

COMPONENT SIDE

27
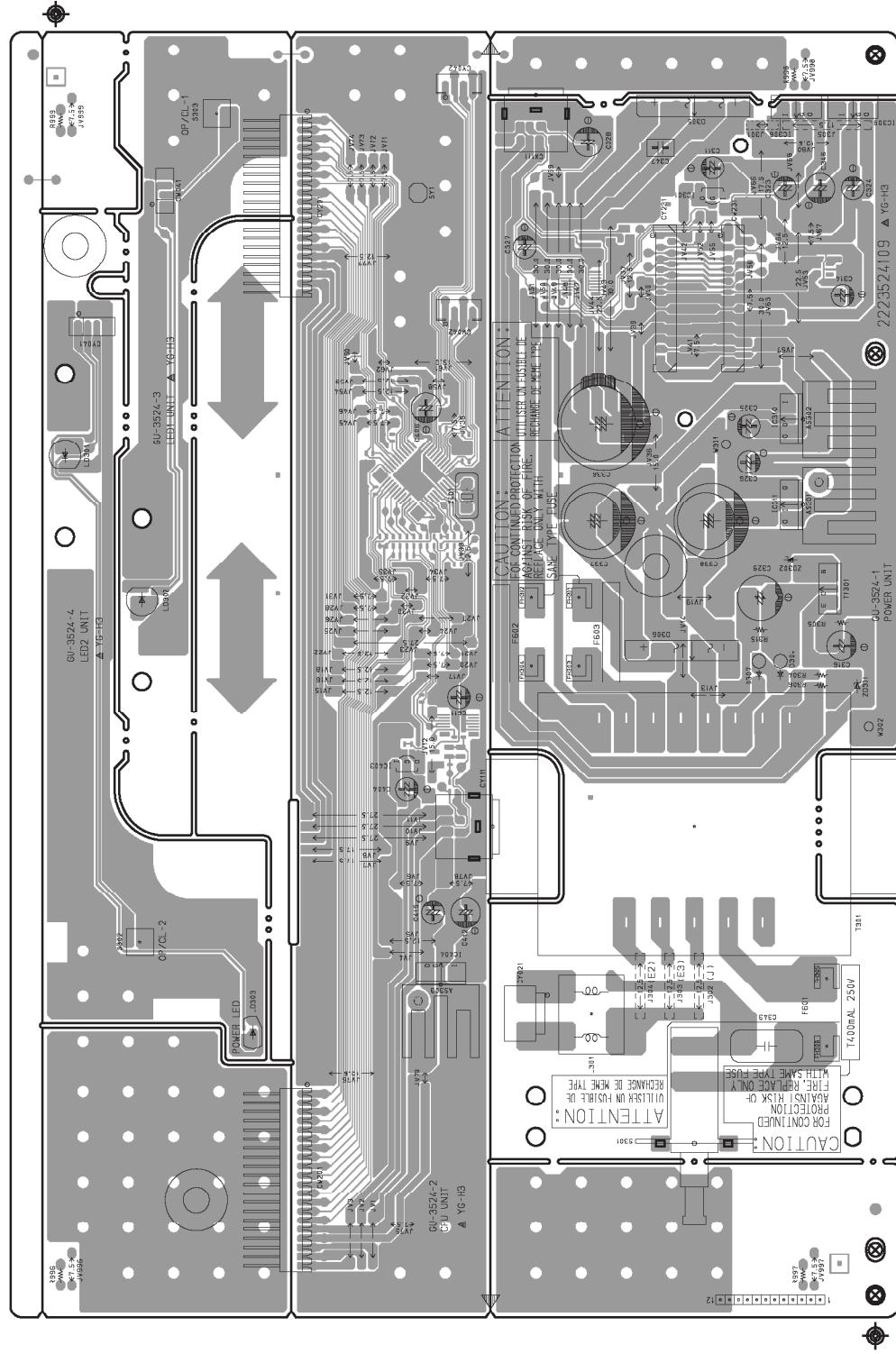
FOIL SIDE
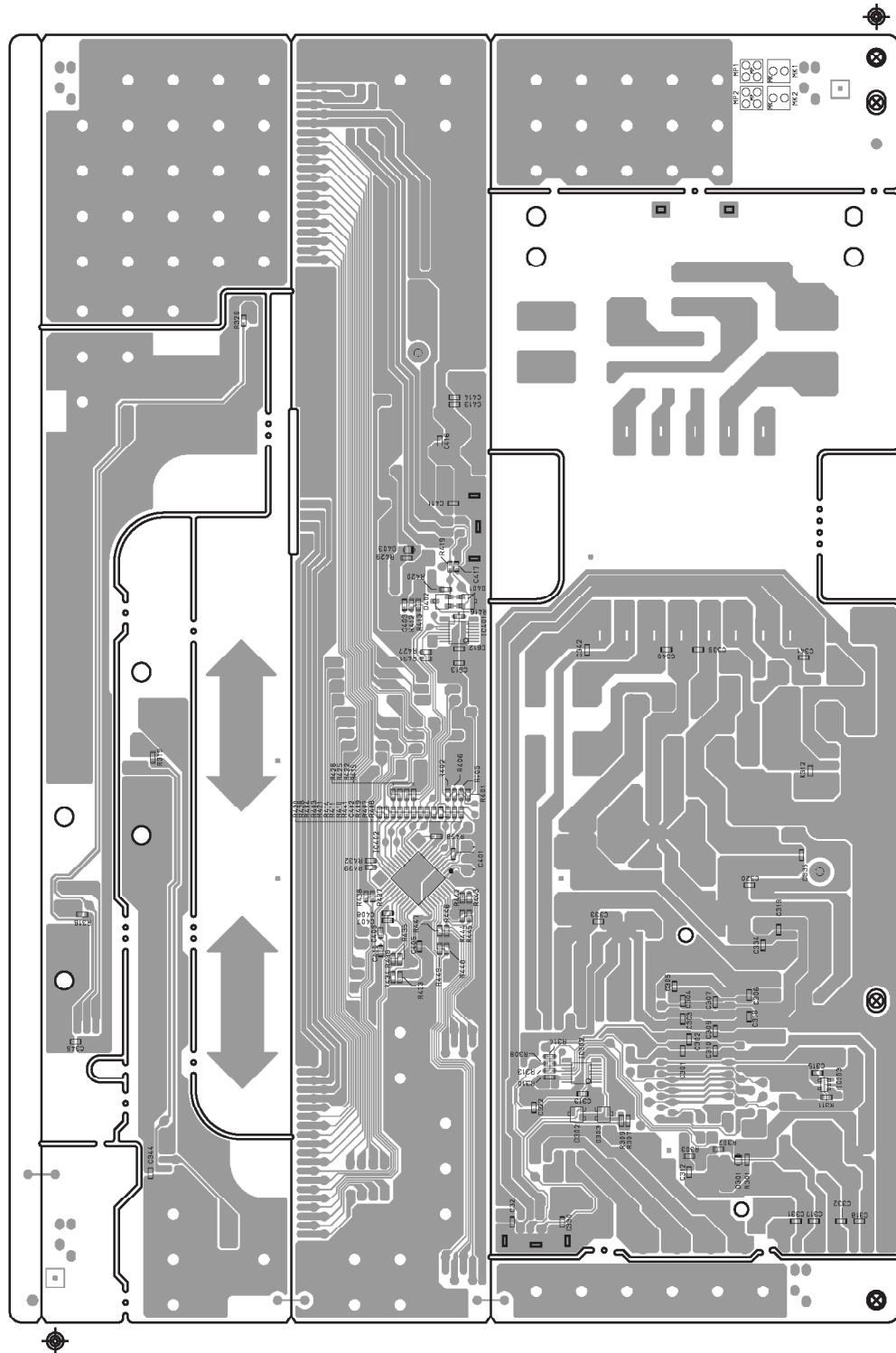
NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: RN 14K 2E 182 G FR
Type / Shape and performance / Power / Resistance / Allowable error / Others

RD : Carbon RC : Composition HS : Metal oxide film RW : Winding RN : Metal film RK : Metal mixture	2B : 1/8W 2E : 1/4W 2H : 1/2W 3A : 1W 3D : 2W 3F : 3W 3H : 5W	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	P : Pulse-resistant type NL : Low noise type NB : Non-burning type FR : Fuse-resistor F : Lead wire forming

✴ Resistance

1 8 2 ⇒ 1800 ohm = 1.8 kohm
— Indicates number of zeros after effective number.
— 2-digit effective number.
- Units: ohm

1 R 2 ⇒ 1.2 ohm
— 1-digit effective number.
— 2-digit effective number, decimal point indicated by R.
- Units: ohm

● Capacitors

Ex.: CE 04W 1H 2R2 M BP
Type / Shape and performance / Dielectric strength / Capacity / Allowable error / Others

CE : Aluminum foil electrolytic CA : Aluminum solid electrolytic CS : Tantalum electrolytic CQ : Film CK : Ceramic	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	HS : High stability type BP : Non-polar type HR : Ripple-resistant type DL : For change and discharge HF : For assuring high requency

CC : Ceramic
CP : Oil
CM : Mica
CF : Metallized
CH : Metallized
	1H : 50V
	2A : 100V
	2B : 125V
	2C : 160V
	2D : 200V
	2E : 250V
	2H : 500V
	2J : 630V
		Z : +80%
		    −20%
		P : +100%
		    −0%
		C : ±0.25pF
		D : ±0.5pF
		= : Others
			U : UL part
			C : CSA part
			W : UL-CSA type
			F : Lead wire forming

✴ Capacity (electrolyte only)

2 2 2 ⇒ 2200µF
— Indicates number of zeros after effective number.
— 2-digit effective number.
- Units: µF.

2 R 2 ⇒ 2.2µF
— 1-digit effective number.
— 2-digit effective number, decimal point indicated by R.
- Units: µF.

✴ Capacity (except electrolyte)

2 2 2 ⇒ 2200pF=0.0022µF
—(More than 2)— Indicates number of zeros after effective number.
— 2-digit effective number.
- Units: pF.

2 2 1 ⇒ 220pF
—(0 or 1)— Indicates number of zeros after effective number.
— 2-digit effective number.
- Units: pF.

- When the dielectric strength is indicated in AC, "AC" is included after the dieelectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

GU-3523 DRIVE P.W.B. UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	New
SEMICONDUCTORS GROUP				
IC101	262 3171 000	MN102H60KDA		
IC111	GEN6411	D4000 SYSTEM ROM	8M FLASH	
IC112	262 2376 903	TC74HCT7007AF(TP1)		
IC113	262 2651 903	BU2618FV(E2)		
IC114	262 1883 905	TC9246F-TP1		
IC118	263 0432 907	NJM78L05AT		
IC201	262 3158 007	MN6627911AC		
IC202	262 3159 909	AN8785SB		
IC203	262 3160 901	AN22002A		
IC204	262 2881 003	16M DRAM(3.3V)		
IC206	262 3166 905	PCM1748E(TAPE)		
IC207	263 0615 902	BA15218F-DXE2		
IC208	262 1953 903	TC7WU04F		
IC210	262 2881 003	16M DRAM(3.3V)		
IC601	262 2951 904	M66005FP		
IC602	262 2745 903	BU2090F(E2)		
TR110	269 0082 902	DTC114EKT96		
TR112	269 0083 901	DTA114EKT96		
TR113	269 0048 904	DTC143EK-T96		
TR201	272 0125 904	2SB709A		
TR202	269 0144 905	DTC114YK-T146		
TR204	273 0460 905	KTC2875B-RTK		
TR206	273 0460 905	KTC2875B-RTK		
D103	276 0717 903	1SS355 TE-17		
D104	276 0438 949	MA151WK (TAPE)		
D106	276 0559 909	DAP202KT146		
D107	276 0438 949	MA151WK (TAPE)		
D108	276 0559 909	DAP202KT146		
D601	276 0559 909	DAP202KT146		
ZD105	276 0450 901	HZS2B-1TD		
LD601	393 9606 909	SEL6927A(TP5)		
LD605	393 9543 910	SLR-325MC (GRN) TAPE		
LD607	393 9543 907	SLR-325VC (RED) TAPE		
LD609	393 9543 910	SLR-325MC (GRN) TAPE		
RESISTORS GROUP				
R103	247 2009 983	RM73B--103JT		
R104	247 2003 989	RM73B--330JT		
R105	247 2018 903	RM73B--0R0KT		
R107	247 2011 942	RM73B--473JT		
R109	247 2009 983	RM73B--103JT		
R110	247 2003 989	RM73B--330JT		
R112	247 2005 903	RM73B--101JT		
R113	247 2009 912	RM73B--512JT		
R114	247 2009 983	RM73B--103JT		

Ref. No.	Part No.	Part Name	Remarks	New
R117	247 2003 989	RM73B--330JT		
R118	247 2006 960	RM73B--471JT		
R119	247 2009 983	RM73B--103JT		
R121	247 2009 912	RM73B--512JT		
R122	247 2008 968	RM73B--332JT		
R123	247 2008 913	RM73B--202JT		
R124	247 2007 943	RM73B--102JT		
R127	247 2011 942	RM73B--473JT		
R128	247 2018 903	RM73B--0R0KT		
R130	247 2009 925	RM73B--562JT		
R131	247 2013 940	RM73B--334JT		
R132	247 2011 942	RM73B--473JT		
R134	247 2003 989	RM73B--330JT		
R157	247 2005 903	RM73B--101JT		
R161	247 2003 989	RM73B--330JT		
R163	247 2018 903	RM73B--0R0KT		
R164	247 2009 983	RM73B--103JT		
R166	247 2005 903	RM73B--101JT		
R169	247 2018 903	RM73B--0R0KT		
R171	247 2009 925	RM73B--562JT		
R173	247 2012 925	RM73B--104JT		
R175	247 2012 912	RM73B--913JT		
R176	247 2012 983	RM73B--184JT		
R177	247 2005 903	RM73B--101JT		
R178	247 2013 937	RM73B--304JT		
R179	247 2008 939	RM73B--242JT		
R180	247 2009 912	RM73B--512JT		
R182	247 2007 943	RM73B--102JT		
R183	247 2005 903	RM73B--101JT		
R186	247 2007 943	RM73B--102JT		
R188	247 2004 920	RM73B--470JT		
R191	247 2014 965	RM73B--105JT		
R193	247 2014 965	RM73B--105JT		
R195	247 2005 903	RM73B--101JT		
R201	247 2008 968	RM73B--332JT		
R203	247 2010 972	RM73B--243JT		
R205	244 2043 937	RS14B3A100JNBST(S)		
R206	247 2010 927	RM73B--153JT		
R207	247 2006 986	RM73B--561JT		
R208	247 2010 927	RM73B--153JT		
R210	247 2007 943	RM73B--102JT		
R211	247 2010 985	RM73B--273JT		
R212	247 2007 943	RM73B--102JT		
R214	247 2010 985	RM73B--273JT		
R215	247 2011 900	RM73B--333JT		
R216	247 2010 927	RM73B--153JT		
R217	247 2010 969	RM73B--223JT		
R218	247 2011 926	RM73B--393JT		
R219	247 2010 927	RM73B--153JT		
R220	247 2009 925	RM73B--562JT		
R222	247 2007 943	RM73B--102JT		
R223	247 2009 925	RM73B--562JT		
R224	247 2018 903	RM73B--0R0KT		
R225	247 2012 925	RM73B--104JT		
R227	247 2009 983	RM73B--103JT		
R229	247 2012 925	RM73B--104JT		
R231	247 2009 983	RM73B--103JT		
R232	247 2012 925	RM73B--104JT		
R234	247 2008 984	RM73B--392JT		
R236	247 2009 983	RM73B--103JT		
R238	247 2001 981	RM73B--4R7KT		

Ref. No.	Part No.	Part Name	Remarks	New
R239	247 2011 926	RM73B--393JT		
R240	247 2008 955	RM73B--302JT		
R241	247 2007 969	RM73B--122JT		
R242	247 2006 986	RM73B--561JT		
R243	247 2018 903	RM73B--0R0KT		
R244	247 2014 949	RM73B--824JT		
R245	247 2009 967	RM73B--822JT		
R247	247 2003 989	RM73B--330JT		
R248	247 2018 903	RM73B--0R0KT		
R249	247 2009 941	RM73B--682JT		
R250	247 2010 956	RM73B--203JT		
R251	247 2011 997	RM73B--753JT		
R252	247 2018 903	RM73B--0R0KT		
R254	247 2018 903	RM73B--0R0KT		
R255	247 2005 903	RM73B--101JT		
R256	247 2004 991	RM73B--910JT		
R259	247 2014 965	RM73B--105JT		
R264	247 2003 947	RM73B--220JT		
R265	247 2011 942	RM73B--473JT		
R267	247 2009 983	RM73B--103JT		
R275	247 2010 956	RM73B--203JT		
R276	247 2007 943	RM73B--102JT		
R277	247 2014 965	RM73B--105JT		
R278	247 2004 975	RM73B--750JT		
R279	247 2018 903	RM73B--0R0KT		
R282	247 2009 925	RM73B--562JT		
R283	247 2010 901	RM73B--123JT		
R284	247 2012 925	RM73B--104JT		
R286	247 2007 943	RM73B--102JT		
R289	247 2009 983	RM73B--103JT		
R294	247 2003 989	RM73B--330JT		
R296	247 2005 945	RM73B--151JT		
R601	247 2018 903	RM73B--0R0KT		
R605	247 2009 983	RM73B--103JT		
R607	247 2006 902	RM73B--331JT (1608)		
R609	247 2005 987	RM73B--221JT		
R611	247 2006 902	RM73B--331JT (1608)		
R613	247 2005 987	RM73B--221JT		
R615	247 2006 902	RM73B--331JT (1608)		
R617	247 2007 972	RM73B--132JT		
RA106	247 9002 909	MNR14=330JE0AB		
RA115	247 9002 909	MNR14=330JE0AB		
VR601	211 0908 003	SLIDE VOLUME		

CAPACITORS GROUP

Ref. No.	Part No.	Part Name	Remarks	New
C101	257 0512 903	CK73F1E104ZT		
C102	254 4300 963	CE04W0J101MT(SRE)		
C103	257 0511 904	CK73F1H103ZT		
C104	257 0512 903	CK73F1E104ZT		
C107	254 4533 921	CE04W0J101MT SMG/RE3		
C108	257 0512 903	CK73F1E104ZT		
C110	254 4533 921	CE04W0J101MT SMG/RE3		
C111	257 0512 903	CK73F1E104ZT		
C112	257 0511 904	CK73F1H103ZT		
C113	257 0512 903	CK73F1E104ZT		
C114	254 4536 915	CE04W1A470MT SMG/RE3		
C115	257 0512 903	CK73F1E104ZT		

Ref. No.	Part No.	Part Name	Remarks	New
C117	254 4538 955	CE04W1C221MT SMG/RE3		
C130	254 4302 958	CE04W1A470MT(SRE)		
C131	254 4299 964	CE04W1C470MT(SRE)		
C132	257 0512 903	CK73F1E104ZT		
C135	257 0512 903	CK73F1E104ZT		
C136	257 0503 967	CC73CH1H150JT		
C138	257 0511 904	CK73F1H103ZT		
C139	254 4300 963	CE04W0J101MT(SRE)		
C140	257 0511 904	CK73F1H103ZT		
C141	257 0512 903	CK73F1E104ZT		
C143	254 4300 989	CE04W0J331MT(SRM)		
C146	257 0512 903	CK73F1E104ZT		
C147	257 0511 904	CK73F1H103ZT		
C148	257 0507 992	CC73CH1H391JT		
C149	257 0508 917	CC73CH1H471JT		
C152	257 0506 951	CC73CH1H101JT		
C154	254 4305 955	CE04W1HR68MT(SRE)		
C156	257 0512 903	CK73F1E104ZT		
C157	254 4300 989	CE04W0J331MT(SRM)		
C158	257 0512 903	CK73F1E104ZT		
C160	257 0511 904	CK73F1H103ZT		
C161	257 0512 903	CK73F1E104ZT		
C169	257 0512 903	CK73F1E104ZT		
C183	257 0511 904	CK73F1H103ZT		
C186	257 0512 903	CK73F1E104ZT		
C201	257 0512 903	CK73F1E104ZT		
C202	257 0509 929	CK73B1H102KT		
C203	257 0512 903	CK73F1E104ZT		
C204	257 0509 929	CK73B1H102KT		
C205	257 0516 909	CK73B1E223KT		
C206	257 0512 903	CK73F1E104ZT		
C207	256 1058 984	CF93A1H124JT (JL)		
C208	254 4302 958	CE04W1A470MT(SRE)		
C209	257 0512 903	CK73F1E104ZT		
C210	254 4300 963	CE04W0J101MT(SRE)		
C211	257 0512 903	CK73F1E104ZT		
C215	254 4538 900	CE04W1C100MT SMG/RE3		
C217	257 0509 990	CK73B1H222KT		
C221	254 4302 916	CE04W1A100MT(SRE)		
C222	257 0516 909	CK73B1E223KT		
C224	257 0512 903	CK73F1E104ZT		
C227	257 0512 903	CK73F1E104ZT		
C228	254 4302 958	CE04W1A470MT(SRE)		
C229	257 0506 935	CC73CH1H820JT		
C231	254 4302 958	CE04W1A470MT(SRE)		
C233	254 4300 989	CE04W0J331MT(SRM)		
C234	257 0512 903	CK73F1E104ZT		
C236	256 1059 912	CF93A1H224JT (JL)		
C237	257 0512 903	CK73F1E104ZT		
C238	257 0501 914	CK73B1H123KT		
C239	257 0510 947	CK73B1H562KT		
C240	257 0516 909	CK73B1E223KT		
C241	257 0501 927	CK73B1H153KT		
C242	257 0506 948	CC73CH1H910JT		
C243	257 0512 903	CK73F1E104ZT		
C244	254 4300 963	CE04W0J101MT(SRE)		
C245	257 0507 950	CC73CH1H271JT		
C246	257 0506 993	CC73CH1H151JT		
C250	257 0512 903	CK73F1E104ZT		
C251	254 4305 997	CE04W1H3R3MT(SRE)		
C252	254 4300 963	CE04W0J101MT(SRE)		

Ref. No.	Part No.	Part Name	Remarks	New
C253	257 0512 903	CK73F1E104ZT		
C257	254 4302 916	CE04W1A100MT(SRE)		
C259	257 0512 903	CK73F1E104ZT		
C260	257 0509 929	CK73B1H102KT		
C261	254 4524 956	CE04W1H2R2MT SMG/RE3		
C263	257 0507 976	CC73CH1H331JT		
C267	257 0512 903	CK73F1E104ZT		
C269	254 4536 928	CE04W1A101MT SMG/RE3		
C270	257 0501 901	CK73B1H103KT (1608)		
C271	257 0512 903	CK73F1E104ZT		
C272	254 4538 926	CE04W1C330MT SMG/RE3		
C273	257 0501 901	CK73B1H103KT (1608)		
C274	257 0512 903	CK73F1E104ZT		
C275	254 4538 900	CE04W1C100MT SMG/RE3		
C276	257 0501 901	CK73B1H103KT (1608)		
C277	257 0512 903	CK73F1E104ZT		
C279	257 0512 903	CK73F1E104ZT		
C280	254 4300 963	CE04W0J101MT(SRE)		
C281	257 0513 902	CK73F1A105ZT		
C282	254 4300 963	CE04W0J101MT(SRE)		
C283	257 0513 902	CK73F1A105ZT		
C284	257 0512 903	CK73F1E104ZT		
C287	254 4538 900	CE04W1C100MT SMG/RE3		
C289	257 0512 903	CK73F1E104ZT		
C290	254 4538 900	CE04W1C100MT SMG/RE3		
C291	257 0512 903	CK73F1E104ZT		
C293	254 4299 964	CE04W1C470MT(SRE)		
C294	254 4193 947	CE04W1C101MT (SRA)		
C295	257 0512 903	CK73F1E104ZT		
C297	257 0511 904	CK73F1H103ZT		
C601	257 0512 903	CK73F1E104ZT		
C603	257 0509 929	CK73B1H102KT		
C604	257 0512 903	CK73F1E104ZT		
C605	257 0506 951	CC73CH1H101JT		
C606	257 0511 920	CK73F1H473ZT		
C607	254 4302 958	CE04W1A470MT(SRE)		
C608	257 0512 903	CK73F1E104ZT		
C611	257 0512 903	CK73F1E104ZT		
OTHER PARTS GROUP				
CX41	205 0355 046	4P KR CON BASE(L)		
CX51	205 0343 058	5P CONN.BASE(KR-PH)		
CX62	205 0343 061	6P CONN.BASE(KR-PH)		
CX161	205 0892 033	16P FFC BASE (P=1)		
CX231	205 0880 003	23P FFC CON.BASE		
CX232	205 0849 044	20P CON BASE(BTMK-S)		
FB121	235 0106 908	CHIP EMIFIL (21A05)		
FB123	235 0106 908	CHIP EMIFIL (21A05)		
FB125	235 0106 908	CHIP EMIFIL (21A05)		
FB202	235 0106 908	CHIP EMIFIL (21A05)		
FL601	393 8070 002	FLT (14-MT-35GN)		*
JK103	204 8672 003	2P PIN JACK (FG)		
JK201	204 8593 001	1P PIN JACK(OR,NI)		
JK202	204 8421 005	MINI JACK		

	Ref. No.	Part No.	Part Name	Remarks	New
	S601	212 0352 018	JOG-SHUTTLE		
	S604	212 5604 907	TACT SWITCH-TA(ALPS)		
	S608	212 5604 907	TACT SWITCH-TA(ALPS)		
	S612	212 5604 907	TACT SWITCH-TA(ALPS)		
	S616	212 5604 907	TACT SWITCH-TA(ALPS)		
	S623	212 0410 002	ROTARY ENCODER-JOG		
	T201	231 8063 009	PULSE TRANS		
	X101	399 0880 900	CSTLS32M0X53		
	X102	399 0595 004	X'TAL(8.4672MHZ)		
★		461 1159 003	FL SPACER		*

POWER SUPPLY UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	New
SEMICONDUCTORS GROUP				
IC301	263 0913 905	PST600C TP		
IC302	262 2813 903	SN74AHCT08PW-EL2		
IC303	263 1178 901	AN80L18RMS		
IC308	263 1048 002	BA033T		
IC309,310	263 0809 006	NJM7805FA(S)		
IC311	263 0554 005	NJM7905FA		
IC401	262 2813 903	SN74AHCT08PW-EL2		
IC402	262 3275 003	TMP86CM47U-4R26		
IC403	263 0913 905	PST600C TP		
IC404	263 0809 006	NJM7805FA(S)		
TR301	272 0083 004	2SB1185(E/F)		
D302	276 0559 909	DAP202KT146		
D303	276 0438 949	MA151WK (TAPE)		
D304	276 0550 908	1SR139-200T-62		
D305,306	276 0623 000	D3SBA20		
D307	276 0550 908	1SR139-200T-62		
D401	276 0559 909	DAP202KT146		
D402	276 0438 949	MA151WK (TAPE)		
ZD301	276 0760 921	MTZJ4.3B T77		
ZD302	276 0762 916	MTZJ27B T77		
LD301,302	393 9627 904	SEL1410E(TP3)		
LD303	393 9543 907	SLR-325VC (RED) TAPE		
RESISTORS GROUP				
R301	247 2006 915	RM73B--271JT		
R302	247 2007 943	RM73B--102JT		
R303	247 2018 903	RM73B--0R0KT		
R307	247 2009 983	RM73B--103JT		
R308	247 2003 947	RM73B--220JT		
R309	247 2007 943	RM73B--102JT		
R310	247 2003 947	RM73B--220JT		
R311	247 2010 985	RM73B--273JT		
R312	247 2008 942	RM73B--272JT		
R313,314	247 2009 983	RM73B--103JT		
R318,319	247 2006 962	RM73B--680JT		
R320	247 2005 903	RM73B--101JT (1608)		
R401,402	247 2007 943	RM73B--102JT		
R403,404	247 2003 947	RM73B--220JT		
R405,406	247 2018 903	RM73B--0R0KT		
R407,408	247 2003 947	RM73B--220JT		
R409	247 2009 983	RM73B--103JT		
R410,411	247 2003 947	RM73B--220JT		
R412	247 2018 903	RM73B--0R0KT		
R413	247 2007 943	RM73B--102JT		
R414	247 2003 947	RM73B--220JT		
R415	247 2007 943	RM73B--102JT		
R416	247 2003 947	RM73B--220JT		
R419	247 2007 943	RM73B--102JT		
R420,421	247 2003 947	RM73B--220JT		
R422	247 2007 943	RM73B--102JT		
R425-428	247 2009 983	RM73B--103JT		

	Ref. No.	Part No.	Part Name	Remarks	New
	R429	247 2006 915	RM73B--271JT		
	R430-439	247 2009 983	RM73B--103JT		
	R441-449	247 2009 983	RM73B--103JT		
	R458	247 2009 983	RM73B--103JT		
CAPACITORS GROUP					
	C301-310	257 0512 903	CK73F1E104ZT		
	C311	254 4536 944	CE04W1A331MT SMG/RE3		
	C312	257 0509 929	CK73B1H102KT		
	C313	257 0512 903	CK73F1E104ZT		
	C314	254 4538 942	CE04W1C101MT SMG/RE3		
	C315	257 0512 903	CK73F1E104ZT		
	C316	254 4535 929	CE04W1J470MT SMG/RE3		
	C317-320	257 0512 903	CK73F1E104ZT		
	C322	257 0512 903	CK73F1E104ZT		
	C323-327	254 4536 931	CE04W1A221MT SMG/RE3		
	C328	254 4538 955	CE04W1C221MT SMG/RE3		
	C329	254 4540 707	CE04W1J331MC SMG/RE3		
	C331-335	257 0512 903	CK73F1E104ZT		
	C336	254 4442 711	CE04W1C103MC(SMG)		
	C337,338	254 4539 718	CE04W1C222MC SMG/RE3		
	C343	253 8022 707	CK45F2EAC103MC		
	C344,345	257 0512 903	CK73F1E104ZT		
	C346	254 4541 942	CE04W1E101MT SMG/RE3		
	C401	257 0512 903	CK73F1E104ZT		
	C402	257 0501 901	CK73B1H103KT (1608)		
	C403	257 0509 929	CK73B1H102KT		
	C404	254 4536 931	CE04W1A221MT SMG/RE3		
	C405	257 0512 903	CK73F1E104ZT		
	C406	254 4302 958	CE04W1A470MT(SRE)		
	C407-410	257 0512 903	CK73F1E104ZT		
	C412	254 4538 955	CE04W1C221MT SMG/RE3		
	C413,414	257 0512 903	CK73F1E104ZT		
	C415	254 4536 931	CE04W1A221MT SMG/RE3		
	C416	257 0512 903	CK73F1E104ZT		
	C611	254 4536 931	CE04W1A221MT SMG/RE3		
	C612,613	257 0512 903	CK73F1E104ZT		
OTHER PARTS GROUP					
	CW41	203 6369 027	4P KR-DA CONN CORD		
	CW42	205 0343 045	4P CONN.BASE(KR-PH)		
	CW201	205 0850 046	20P CON BASE(BTMK-P)		
	CW231	205 0880 003	23P FFC CON.BASE		
	CX111	205 1135 003	8P MD BASE (F-S)		
	CY21	205 0581 001	2P VH CONNECTOR BASE		
	CY41	203 6369 027	4P KR-DA CONN CORD		
	CY42	205 0343 045	4P CONN.BASE(KR-PH)		
	CY111	205 1135 003	8P MD BASE (F-S)		
	CY201	205 0850 046	20P CON BASE(BTMK-P)		
	CY231	205 0880 003	23P FFC CON.BASE		
⚠	F601	206 1087 057	FUSE (ET0.4A)	E3	
⚠		206 1087 031	FUSE (ET0.25A)	E2	

	Ref. No.	Part No.	Part Name	Remarks	New
	FH305,306	202 0040 909	FUSE CLIP (TAPE)		
	L301	235 0159 007	PLH10AN3711ROP2B		
	S301	212 1176 015	POWER SWITCH(TV-5)		
	S302,303	212 5604 907	TACT SWITCH-TA(ALPS)		
	X401	399 0805 901	CSTLS16M0X53-A0		
★		513 3904 007	THERMAL LABEL(5X23)		
★		GEN6256-1	FUSE LABEL SUB ASS'Y	E2	

EXPLODED VIEW OF REMOTE CONTROL UNIT
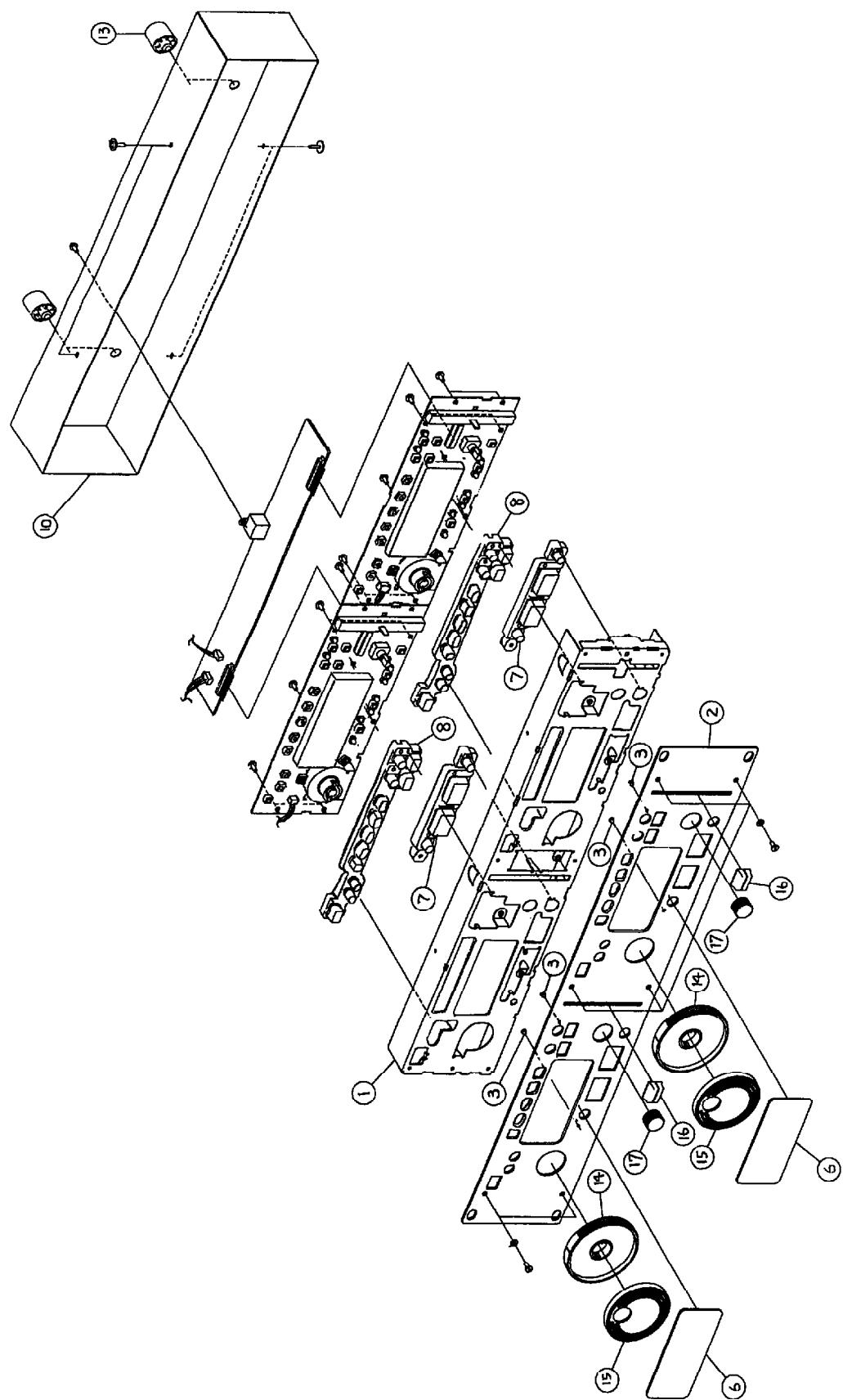
PARTS LIST OF EXPLODED VIEW (REMOTE CONTROL UNIT)

	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	1	441 1984 009	RC FRONT SUB PANEL		1	*
	2	144 2832 107	RC FRONT PANEL		1	*
	3	143 1072 004	LENS		4	
	4	475 1178 009	3W-B		6	
	6	146 2312 005	WINDOW		2	*
	7	119 0122 101	R.KEY (PLAY/PAUSE)		2	*
	8	119 0121 102	R.KEY (FUNCTION)		2	*
	10	105 1350 119	COVER		1	*
	13	104 0270 006	FOOT		4	
	14	112 0910 105	SHUTTLE RING		2	*
	15	112 0911 104	JOG DIAL		2	*
	16	113 1840 206	SLIDE KNOB		2	
	17	112 0820 017	KNOB (MARU)		2	
★		203 6407 031	4P KR-KR CON CORD		1	
★		203 6407 044	4P KR-KR CON CORD		1	
SCREWS						
	5	471 9050 020	3X6 FHHS MFZNII-B		6	
	9	473 7002 005	3X6 CBTS(S)-Z		20	
	11	471 8010 113	SPECIAL SCREW		4	
	12	471 1832 000	M3-SEMS SCREW(6W)		1	

EXPLODED VIEW OF CHASSIS AND CABINET

Parts List
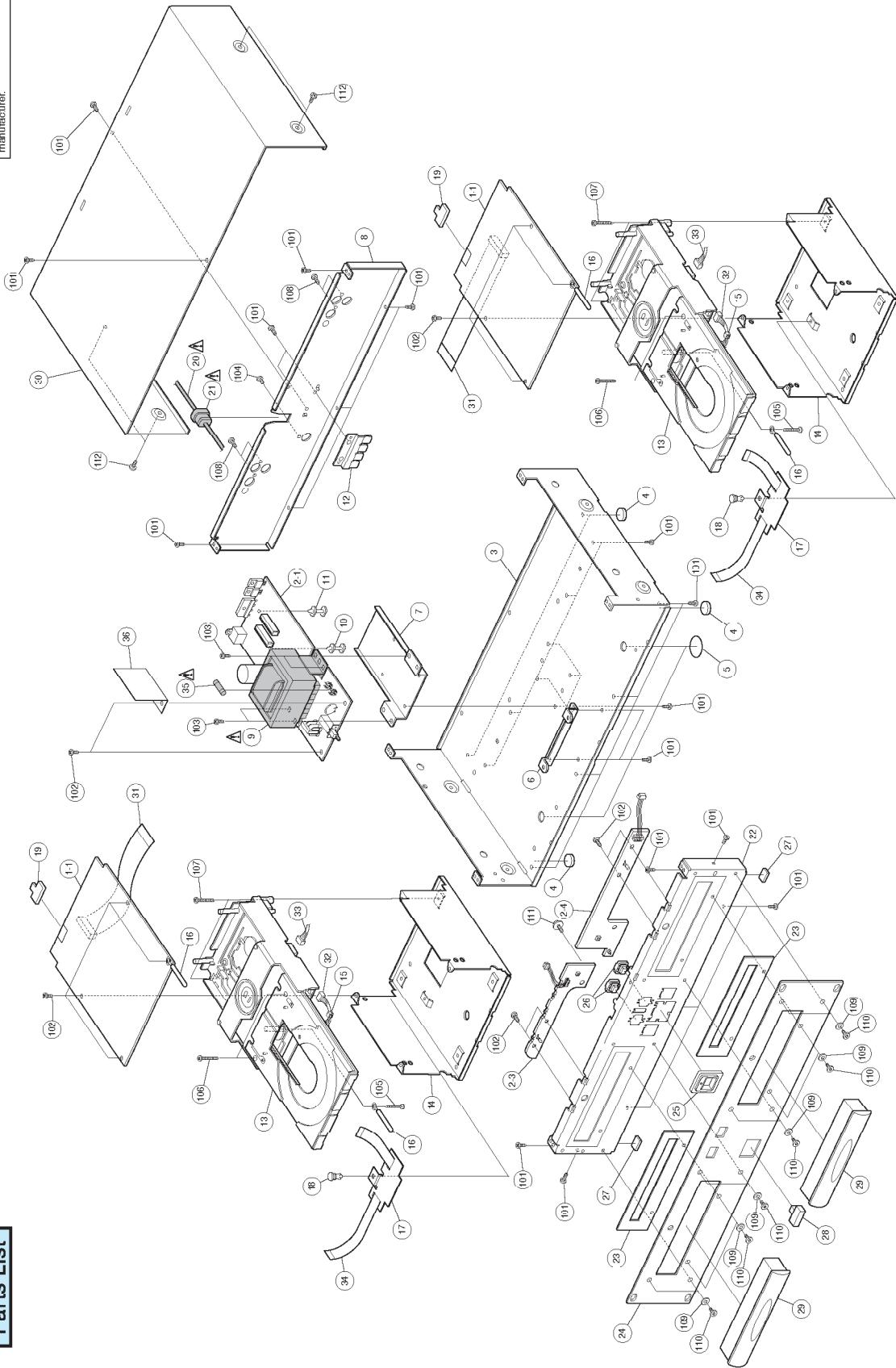
PARTS LIST OF EXPLODED VIEW (CHASSIS AND CABINET)

					Q'ty	
	1	GU-3523	DRIVE P.W.B. UNIT		2	
	1-1		DRIVE P.W.B. UNIT		-	
	1-2		PANEL UNIT	for RC unit	-	
	2	GU-3524	POWER SUPPLY UNIT	E3	1	
		GU-3524A	POWER SUPPLY UNIT	E2, E2K	1	
	2-1		POWER UNIT		-	
	2-2		CPU UNIT	for RC unit	-	
	2-3		LED 1 UNIT		-	
	2-4		LED 2 UNIT		-	
	3	411 2033 000	CHASSIS		1	*
	4	461 0706 127	FOOT SHEET		2	
	5	513 3175 001	BLIND LABEL		2	
	6	412 4921 003	PWB BRACKET		1	
	7	412 4343 102	TRANS BRACKET		1	
	8	105 1431 009	BACK PANEL	E3	1	
	8	105 1431 012	BACK PANEL	E2, E2K	1	
⚠	9	233 6452 003	POWER TRANS		1	*
	10	412 2814 057	CARD SPACER (L=12)		1	
	11	412 2814 086	CARD SPACER (L=14.8)		1	
	12	412 9371 001	SPRING PLATE		1	
	13	337 0100 006	CD MECHA(CD11FTA3N)		2	
	14	412 5028 109	MECHA BRACKET		2	*
	15	445 0033 005	WIRE CLAMP BAND		2	
	16	445 8028 009	CORD HOLDER		4	
	17	461 1153 009	FFC COVER		2	*
	18	479 0003 025	PUSH RIVET		2	
	19	441 1985 008	HARD GASKET		2	*
⚠	20	206 2155 001	AC CORD W/CON.E3	E3	1	
⚠	20	206 2089 106	AC CORD W/CON.E2	E2	1	
⚠	20	206 2178 004	KOREA AC CORD VH	E2K	1	
⚠	21	445 0084 009	CORD BUSH	E3	1	
⚠	21	445 0056 008	CORD BUSH	E2, E2K	1	
	22	441 1983 000	FRONT SUB PANEL		1	*
	23	415 0910 004	BLIND SHEET		2	*
	24	144 2831 108	FRONT PANEL		1	*
	25	146 2275 003	P.SW KNOB GUIDE ASSY		1	
	26	119 0096 004	RUBBER KEY (C)		2	
	27	461 0740 002	SHEET		2	
	28	113 1689 001	P.SW KNOB		1	
	29	146 2311 006	LOADER PANEL		2	*
	30	102 0663 002	TOP COVER		1	*
	31	009 0143 032	23P FFC CABLE		2	
	32	203 8305 047	5P KR-KR CON.CORD	CX51	2	
	33	204 0307 062	6P KR-KR CON CORD	CX62	2	
	34	009 0241 031	16P FFC CABLE	CX161	2	
⚠	35	206 1087 057	FUSE (ET0.4A)	E3 F601	1	
⚠	35	206 1087 031	FUSE (ET0.25A)	E2, E2K F601	1	
	36	461 1161 004	PROTECT COVER	E3	1	
	109	475 1178 009	3W-B		12	
★		513 3826 004	E2 LASER CAUTION	E2, E2K	2	
★		415 0790 075	UL TUBE (14.3) BK	E2, E2K	1	
★		445 0033 005	WIRE CLAMP BAND	E2, E2K	1	
★		GEN6335	R.SHEET E3 SUB ASS'Y	E3	1	
★		GEN6356	R.SHEET E2 SUB ASS'Y	E2, E2K	1	
★		513 3564 007	RATING LABEL BASE		1	

					Q'ty	
★		513 3326 009	BAR CODE LABEL FILM		1	
★		GEN6154	MANUFAC.DATE SUB ASS	E3	1	
SCREWS						
	101	473 7015 018	3X8 CBTS (S)-B		30	
	102	473 7002 005	3X6 CBTS(S)-Z		14	
	103	473 7004 003	4X8 CBTS (S)-Z		4	
	104	471 3303 029	3X6 CBS-B		1	
	105	473 7508 017	3X10 CBTS (P)-B		2	
	106	473 7032 004	3X25 CPTS(S)-Z		4	
	107	473 7033 003	3X32 CBTS-S (B)		4	*
	108	477 0064 107	FIXING SCREW		4	
	110	471 9050 020	3X6 FHHS MFZNII-B		12	
	111	471 8010 100	SPECIAL SCREW		1	
	112	477 0263 005	3P. SWELLING SCREW		4	

EXPLODED VIEW OF CD MECHANISM UNIT (CD11FTA3N)
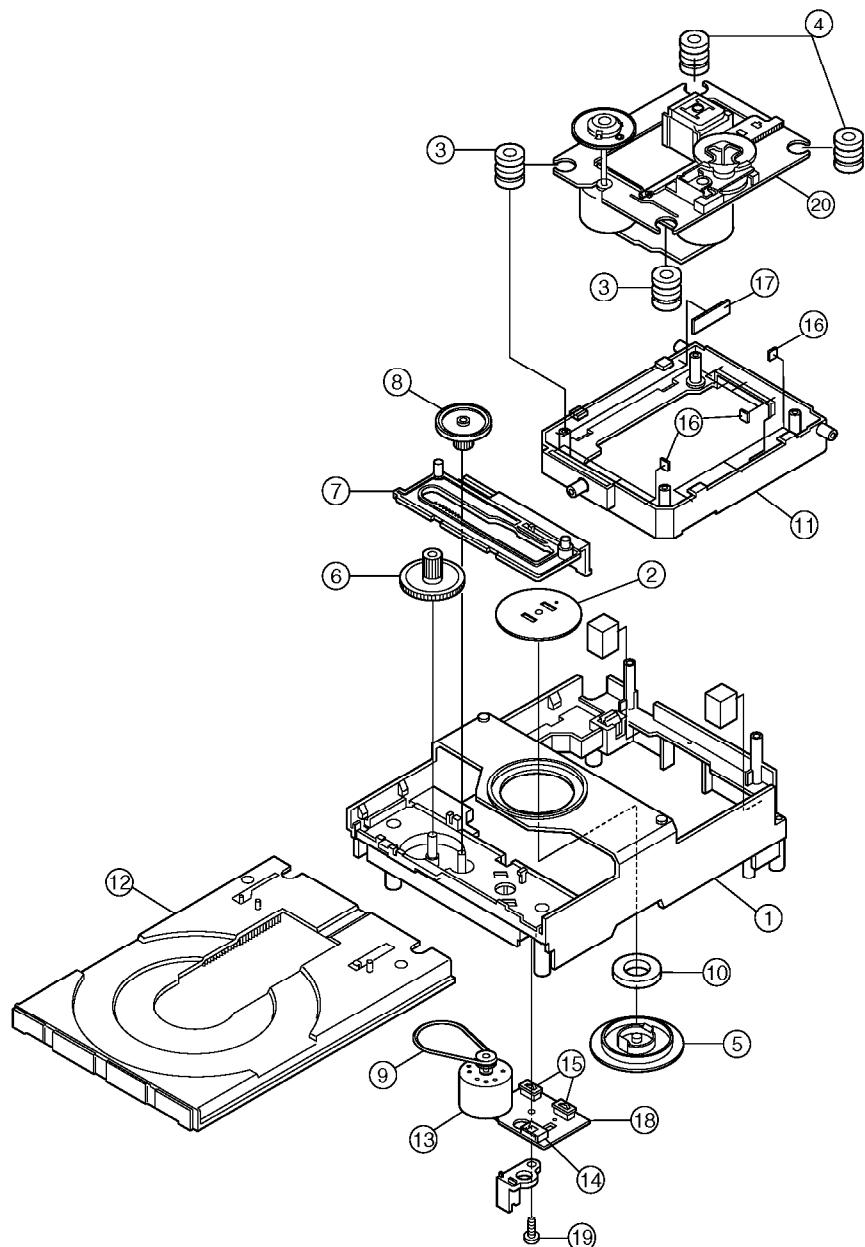
PARTS LIST OF CD MECHANISM UNIT

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	964 0009 006	Frame chassis		1	11	964 0010 008	Mecha lifter		1
2	964 0009 103	Magnet plate		1	12	964 0010 105	Loading table		1
3	964 0009 200	Rubber cushion		2	13	964 0010 901	Loading motor		1
4	964 0009 307	Rubber cushion		2	14	964 0010 202	5P Plug		1
5	964 0009 404	Magnet holder		1	15	964 0010 309	Push switch 2-1		2
6	964 0009 501	Drive gear		1	16	964 0010 406	Cushion		9
7	964 0009 608	Slide gear		1	17	964 0010 503	Cushion		2
8	964 0009 705	Pulley gear		1	18	964 0010 600	Motor P.W.B.		2
9	964 0009 802	Square belt		1	19	964 0010 707	Screw 3×8 SCR S-TPG BIN		1
10	964 0009 909	Magnet		1	20	964 0011 007	Mecha DA11T3CN		1

PACKING VIEW
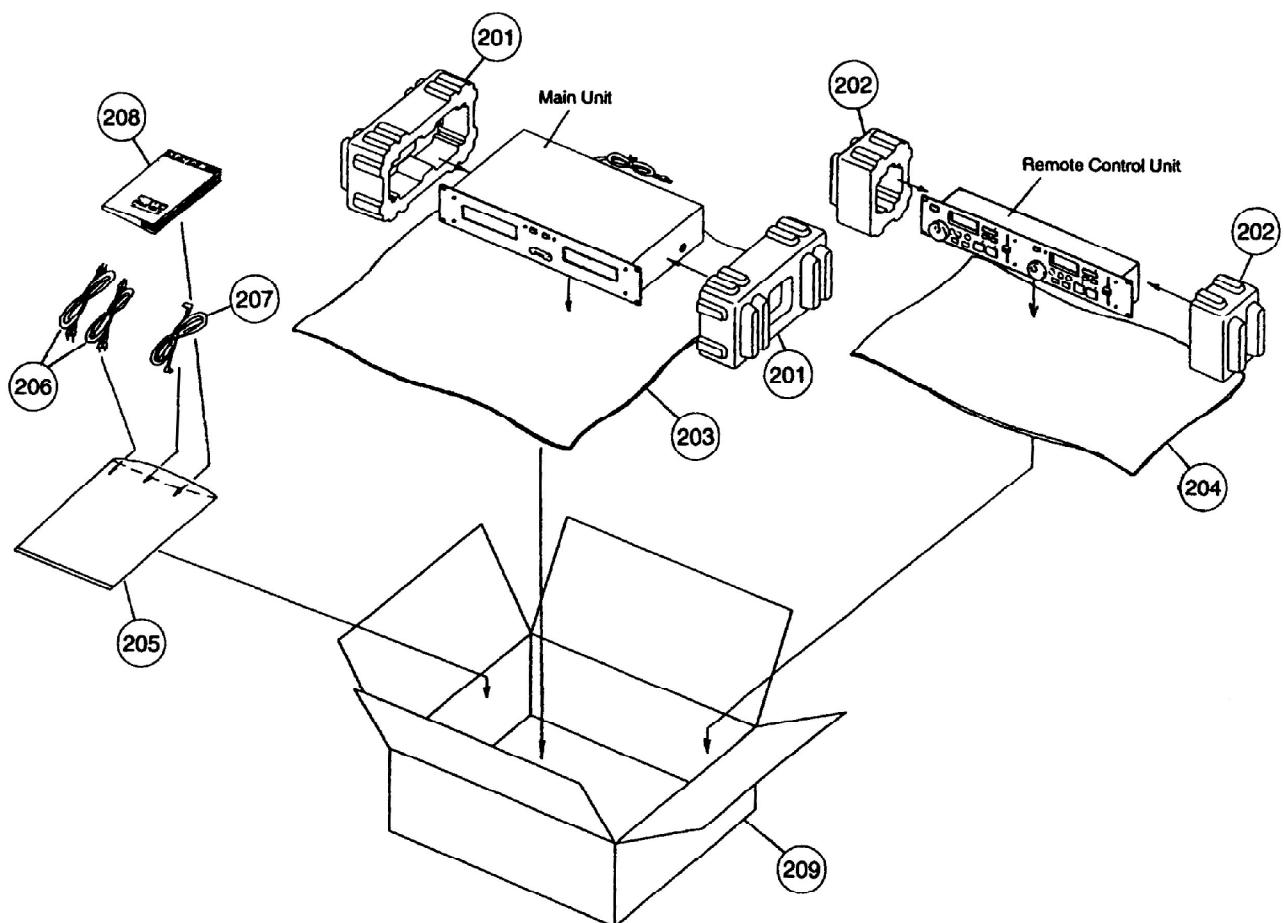
PARTS LIST OF PACKING & ACCESSORIES

	Ref. No.	Part No.	Part Name	Remarks	Q'ty	New
	201	503 1001 507	CUSHION		2	
	202	503 1010 404	CUSHION (RC)		2	
	203	505 0102 092	STYLEN PAPER		1	
	204	505 0102 021	STYLEN PAPER		1	
	205	505 0038 030	POLY COVER		1	
	206	203 2360 004	2P PIN CORD		2	
	207	204 2869 016	8P MD CON.CORD(L)		1	*
	208	511 4031 009	INST. MANUAL		1	
	209	501 2237 002	CARTON CASE		1	
★		515 0945 007	WARRANTY (COM.)	E3	1	
★		515 0923 207	S.S.LIST COM.(EX)		1	
★		-	CONT.CARD(L)		1	
★		-	BAR CODE LABEL		1	

WIRING DIAGRAM

DN-D4000 DOUBLE CD PLAYER

REMOTE CONTROLLER

GU-3523-2 PANEL UNIT

GU-3524-2 CPU UNIT

GU-3524-3 LED1 UNIT

GU-3524-1 POWER UNIT

GU-3524-4 LED2 UNIT

GJ-3523-1 MAIN UNIT

CD MECHA
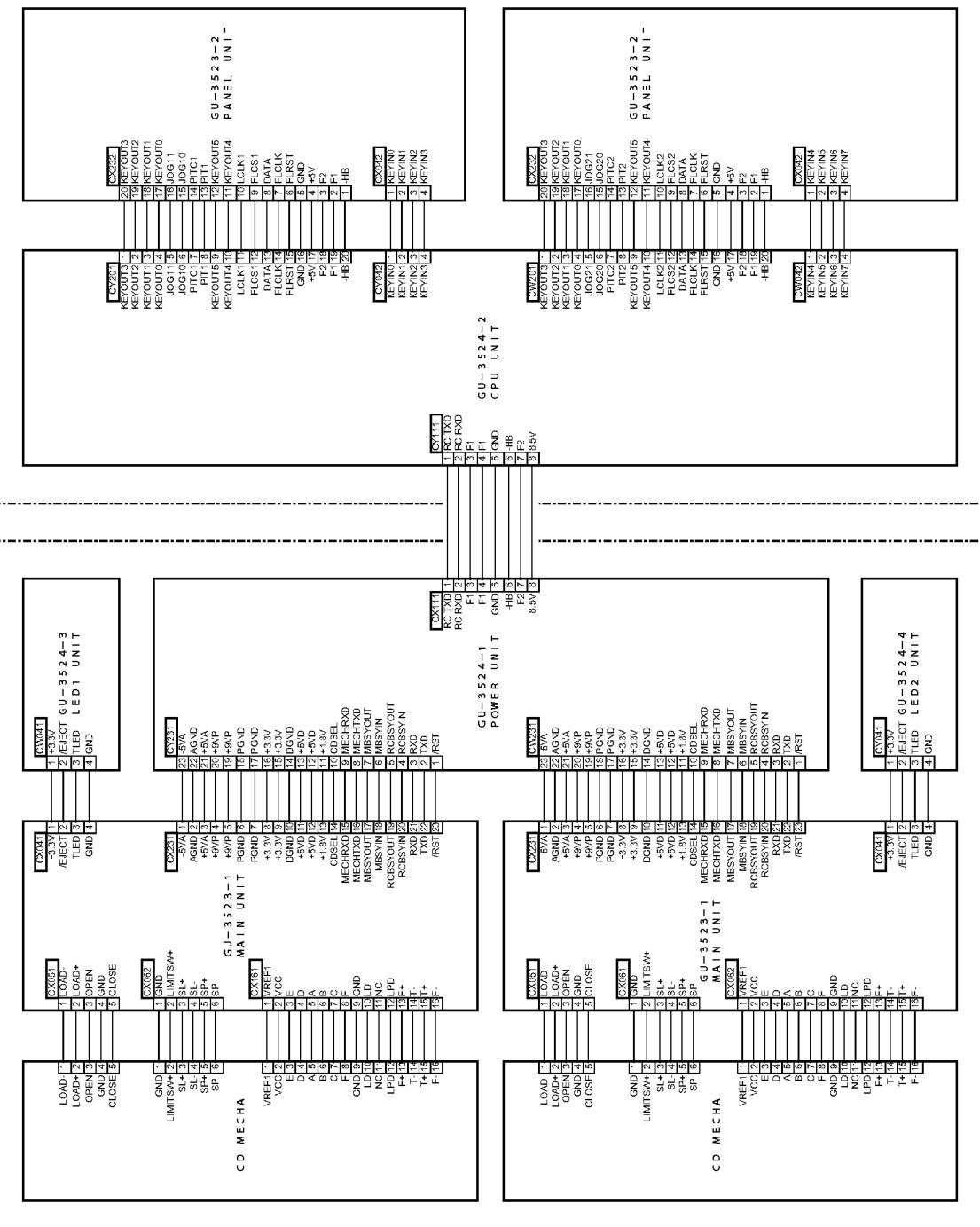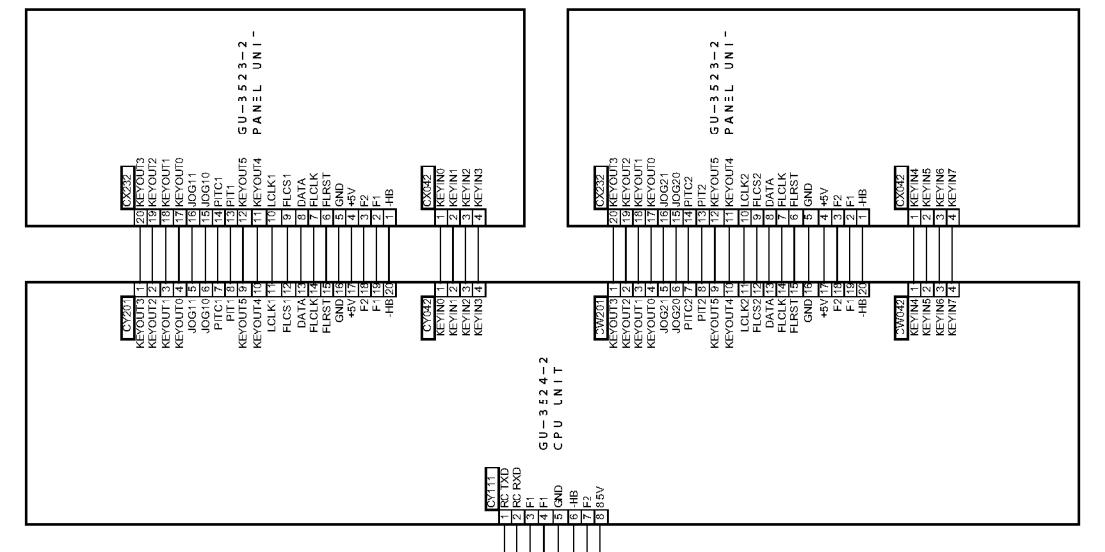
NOTE FOR SCHEMATIC DIAGRAM

WARNING:
Parts marked with this symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 460 kohms, the unit is defective.

WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

NOTICE
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM
M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD.
P=MICRO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT
NO SIGNAL INPUT CONDITION.
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE
WITHOUT PRIOR NOTICE.

配線図について

⚠ 印の部品は安全を維持するために重要な部品です。
従って交換時は必ず指定の部品を使用してください。

注）　1. 指定なき抵抗値は　、kはk　、MはM　を示す。
　　　2. 指定なきコンデンサーの値はμF、pはpFを示す。
　　　3. 各部の電圧は無信号の値を示す。
　　　4. この配線図は基本配線図です。改良等のため変更することがありますのでご了承ください。

SCHEMATIC DIAGRAMS (1/3)
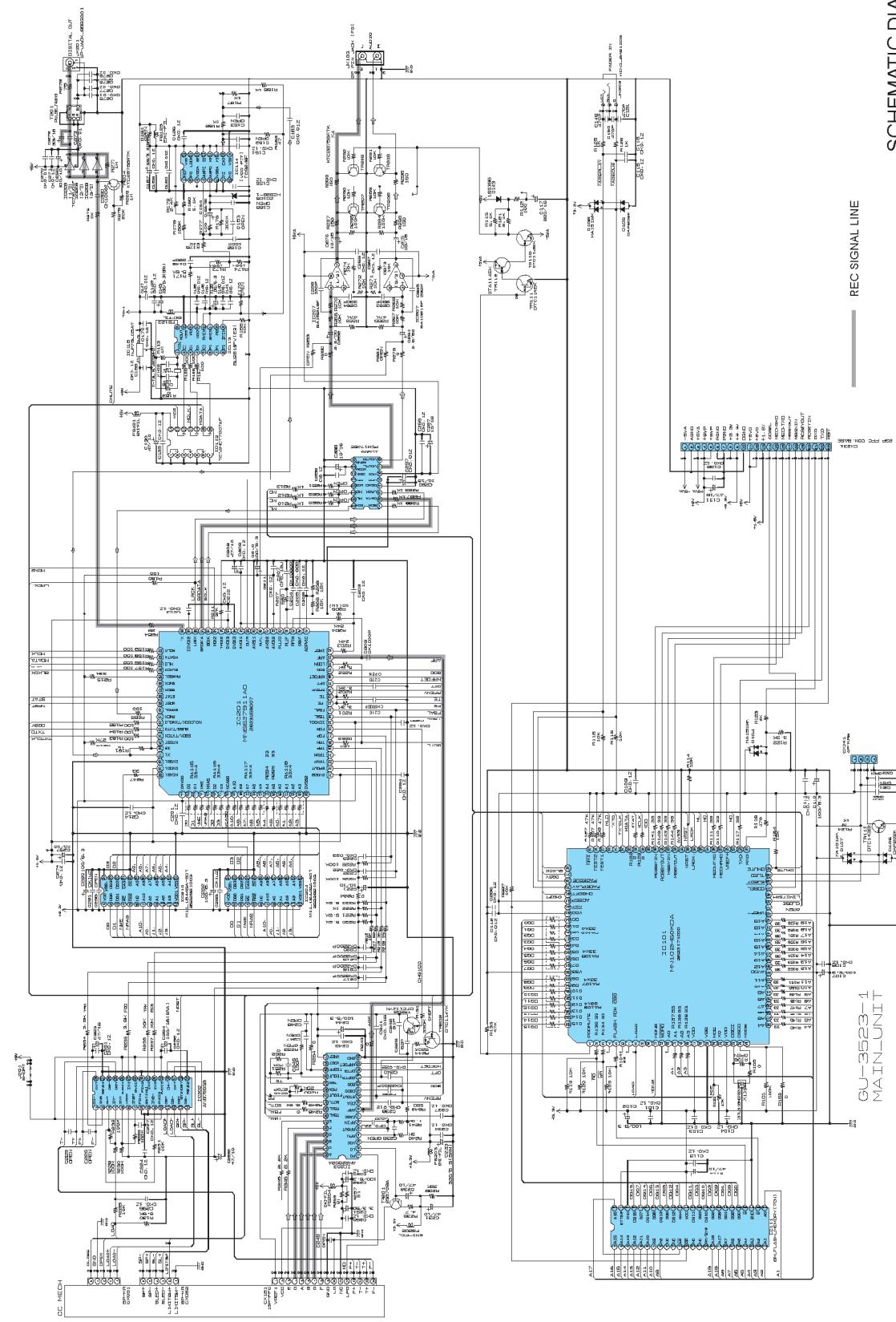
SCHEMATIC DIAGRAMS (1/3)

GU-3523-1

GU-3523-1
MAIN UNIT

REC SIGNAL LINE

SCHEMATIC DIAGRAMS (2/3)

SCHEMATIC DIAGRAMS (2/3)

GU-3523-2

SCHEMATIC DIAGRAMS (3/3)

SCHEMATIC DIAGRAMS (3/3)

GU-3524-1
GU-3524-2
GU-3524-3
GU-3524-4
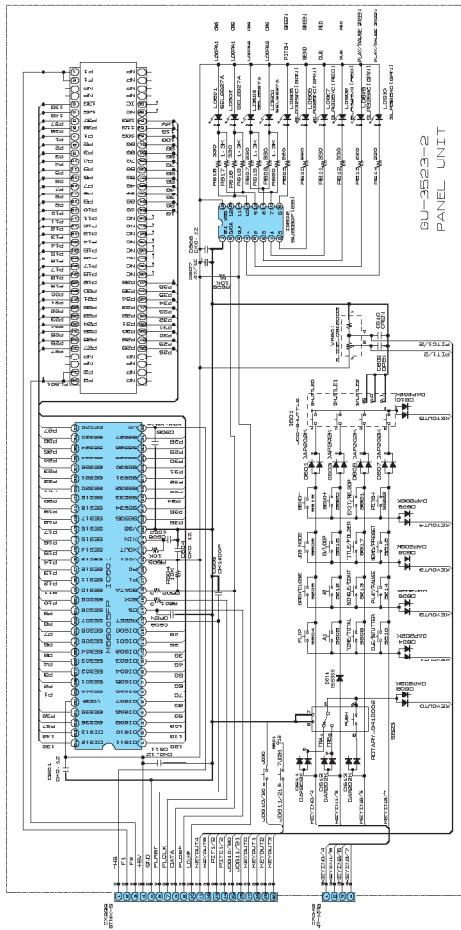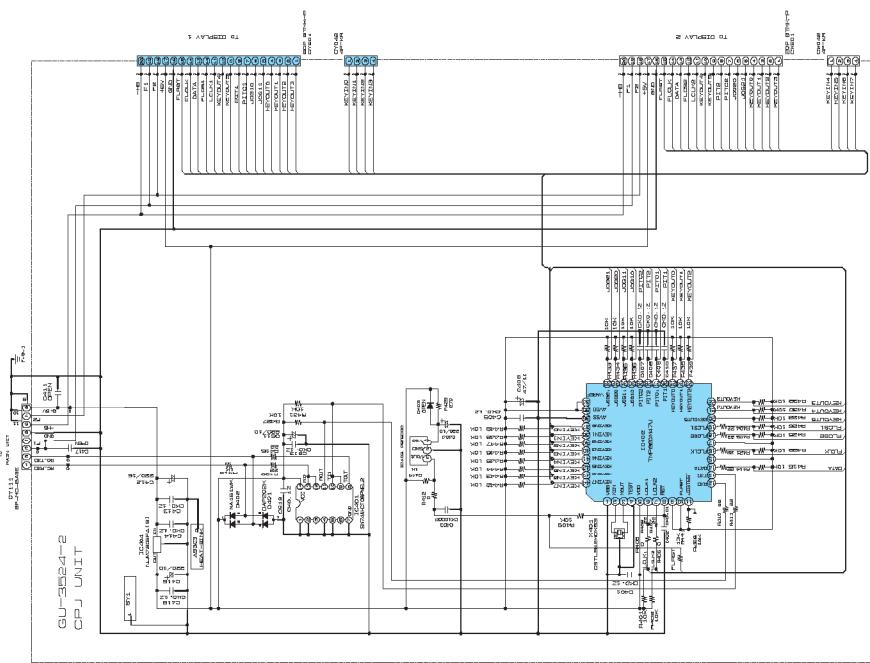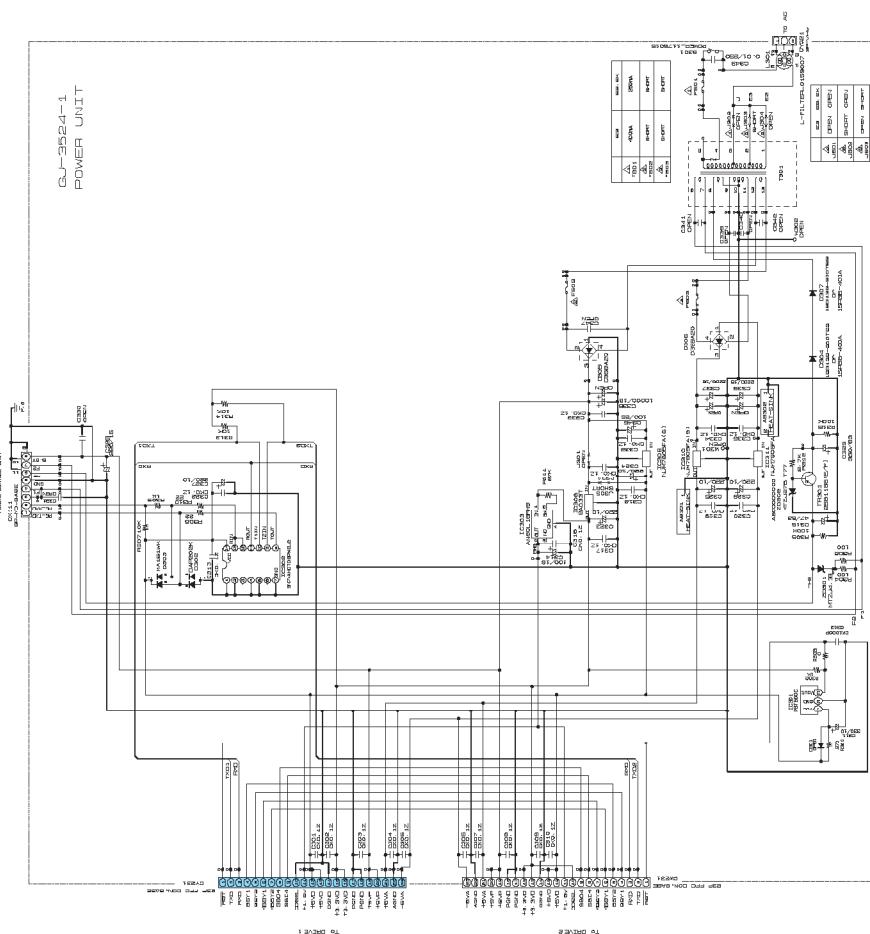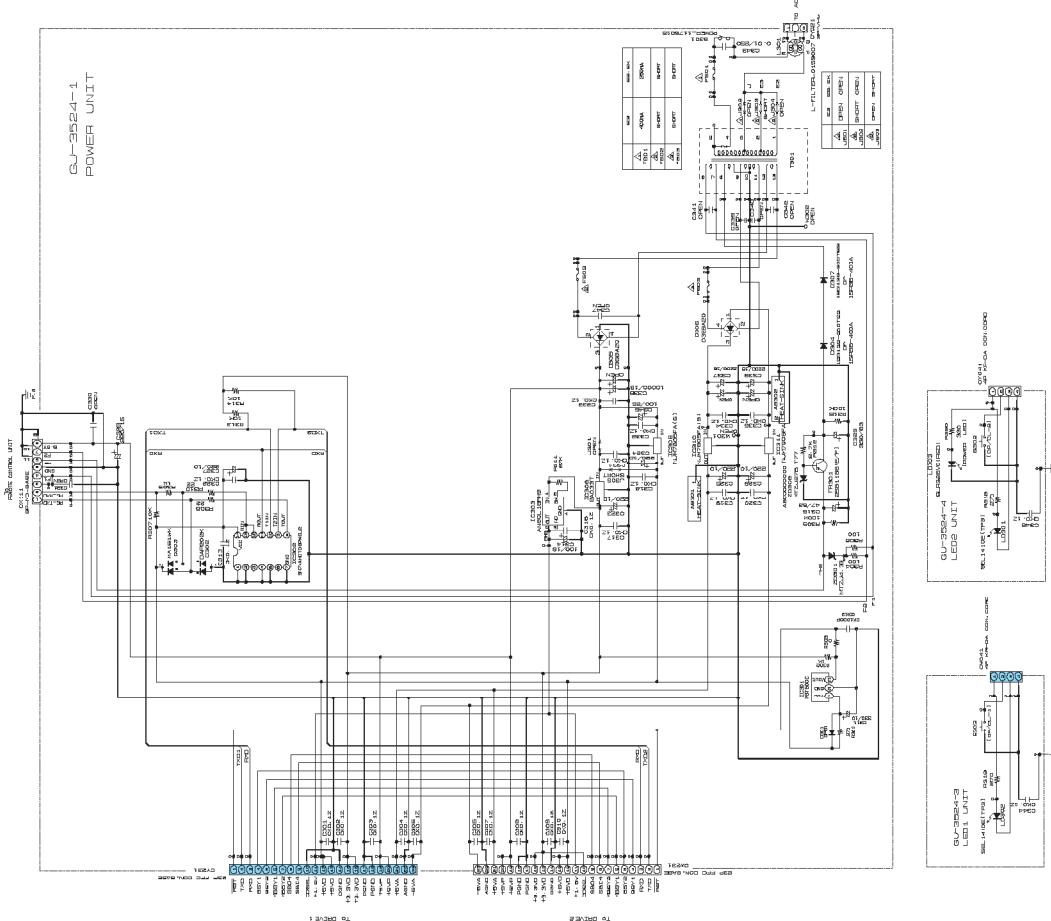
IMPORTANT - PLEASE READ

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DN-D4000 Plug In Procedure

Please read these instructions several times before performing the actual procedure.

Step 1: CD-R/RW Creation

1. You should have already downloaded files to a folder of your choice at this point.
    Example: (C:\D4000 or Desktop)

2. Launch your disc burning software. (Roxio, Nero..etc)

3. Within your software options, select to make a **DATA disc**. *(Not Audio!)*

4. Go to the properties of your burner software and find the **ISO9660** format setting. Refer to our "Software Burning Guide" on page 6 & 7 or contact your software provider *if* you cannot find it.
    *(You must find and select **ISO9660** or the procedure will fail)*

5. Go to the properties of your burner software and find the **MODE/LEVEL** setting. In most cases, they are referred to as, **MODE 1/LEVEL1 CD-ROM**. Refer to our "Software Burning Guide" on page 6 & 7 or contact your software provider *if* you cannot find it.
    *(You must find and select **MODE 1/LEVEL1 CD-ROM** or the procedure will fail)*

    > 🛑 **Note:** If you are using Windows XP "drag and drop" to burn your disc, the procedure will fail.
    > Windows XP does not give you the option to select, **ISO9960** or **MODE/LEVEL 1**.
    > *You must use third party software such as, Roxio/Easy Creator, Nero…etc.

6. Locate the **.bin** file (V4K_6832.bin) from where you initially saved it on your PC.

7. Drag and drop the (1) **.bin** file into your burners software project window.

    > 🛑 The **.bin** file (listed above) should be the **ONLY** selected file to be recorded.
    > Please verify before continuing to # 8.

8. Finalize the CD-R/RW at the slowest possible recording speed.
    (You must finalize/close the disc or the procedure will fail)
    If you're not sure of what you are doing, please use a CD-RW disc so you can erase it and start over.

9. Take the finalized disc over to the DN-D4000 and go to Step 2.

Step 2: Uploading the System Software

1. Turn the power **ON** for the DN-D4000 and remove all discs

2. Take the *DATA* disc you've just made, load it into **drive 1** and close the drawer.

3. Once the disc has been identified, the following will be displayed:

```
┌──────────────┐
│ Version up   │
└──────────────┘
        │
        ▼
┌──────────────┐
│ xxxx ->6832  │
└──────────────┘
        │
        ▼
┌──────────────┐     ┌──────────────┐     ┌──────────────┐     ┌──────────────┐
│ Push Play!   │ ──► │ xxxx ->6832  │ ──► │ Push Play!   │ ──► │ xxxx ->6832  │
└──────────────┘     └──────────────┘     └──────────────┘     └──────────────┘
```
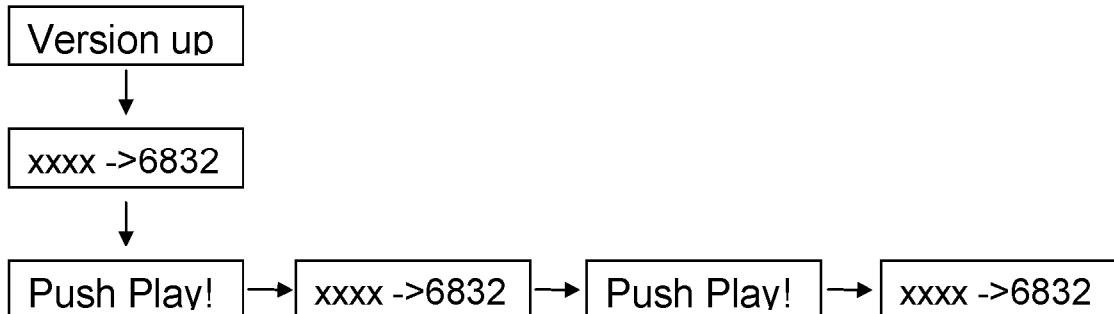
> **Note:**
> *If you see **"disc error"** in the display, chances are the *DATA* disc was not burned properly as described in Step 1. *See pages 4 & 5 for additional help.

4. Push the **PLAY** button on **drive 1**
   The display will proceed to count upward and the green tray LED will start to flash
   The left drawer will automatically open when completed

> 🛑 **Warning:**
> *Do not turn the power off during this wait period or else your machine will become inoperable and require factory service.

5. Move the *DATA* disc over to the right drive and close the drawer for drive 2.
   Leave the drawer open for drive 1

6. Press the **PLAY** button on right drive when indicated.
   The right drawer will automatically open when completed

7. Remove the *DATA* disc from the right drive.

8. Shut the power **OFF,** then back **ON** and close both drawers.

9. Verify your software by pressing the PRESET button (on either side) for more than 1 sec. In PRESET mode turn the track knob counter clockwise until you see "SysVer6832".

DN-D4000 PLUG IN'S
OPERATING INSTRUCTIONS

New & Current Plug In's as of 10/2004 (6832)

- Seamless Looping and Hot Start accuracy was improved

- Remain Time default was not being saved in the preset mode, now corrected

- *Previous Plug In's listed on page 5 Are Also Included*

Hey DJ's!   Did you check out our latest DN-D6000 YET?

DoubleCD/MP3 Player Comparison Chart

	DENON	
Model Name	DND4000	**DND6000**
Loading Type	Tray	**Slot in**
Remote Size	2U	**3U**
MP3 Playback	Yes	Yes
MP3 Playback	Yes	Yes
MP3 Looping	No	**Yes**
MP3 Hot Starts	No	**Yes**
MP3/CD Scratching	No	**Yes**
File Search System	No	**Yes**
MP3 ID3-tag Display	Yes	Yes
MP3 File Name Display	Yes	Yes
CD-TEXT	Yes	Yes
Next Track Reserve with Crossfade	No	**Yes**
CD Seamless looping	Yes(2)	Yes(2)
CD Hot Starts	Yes(2)	Yes(2)
Sampler(time/sec)	No	**Yes(15)**
Key Adjust	No	**Yes**
On-Board DSP Effects	No	**Yes(7)**
Auto BPM	No	**Yes**
MEMO	Yes(300)	**Yes(1000)**
Custom Paper Slipmats	No	**Yes**

For more information about the DN-D6000, check out page 8 & 9

DN-D4000 PLUG IN'S
OPERATING INSTRUCTIONS

Previous Plug In's as of 8-25-03 (SYS 6505)

- **Playback File Limit:**
  The playback limit of 150 MP3 files per disc has been increased to 999 MP3 files per disc. However, the internal "disc memo" capacity of saving 150 files per disc has not changed. Please refer to your owner's manual for "disc memo" operation. *This applies to MP3 discs only.

- **3-way MP3 display preset selection:**
  Based on how you recorded your MP3 discs, Denon had added a convenient 3-way display option to view file information with or without ID3 Tags. *This applies to MP3 discs only.

  How to use:

  Go into your preset mode by holding down the **[preset]** button for more than 1 second in CUE, PAUSE or NO DISC mode. Then turn the **[track]** knob and find **T.Disp All**. Tap "down" on the **[track]** knob once to find **F. Name OFF**. Tap down again to find **Id3Tag OFF**. Tap again to find **T.Disp All**.
  Select one of the three best options for you and then tap the **[preset]** button to exit and save.

  T.Disp All – Each time the **[Title]** button is pressed, the display order will be:
  File - > Folder -> Title -> Artist -> Album -> File... (great for MP3 discs with ID3 Tags)

  F. Name OFF All – Each time the **[Title]** button is pressed, the display order will be:
  Folder -> Title -> Artist -> Album -> Folder... (great for MP3 discs with ID3 Tags)

  Id3Tag OFF All – Each time the **[Title]** button is pressed, the display order will be:
  File - > Folder -> File... (great for discs without ID3 Tags)

- **Play Lock:**
  This new user selectable feature will prevent accidental track change during PLAY in "Single Mode".

  How to use:

  Go into your preset mode by holding down the **[preset]** button for more than 1 second in CUE, PAUSE or NO DISC mode. Then turn the **[track]** knob and find **PlayM.Sing**. Tap "down" on the **[track]** knob until you see **PlayM.Lock**. Tap the preset button to exit and save. You may temporarily turn this function ON or OFF by cycling through the **[Cont./Single]** button. The display will indicate what mode your in for a brief second each time you press the **[Cont./Single]** button.

## Previous Plug In's as of 6-04-03 (SYS 6490)

- **Remain Time:**
  MP3 "Remain Time" was added to the current feature set.

How to properly burn DENON's Plug-In Software to a CD-R/RW

If you are experiencing problems with your upload, chances are you did not select the proper settings within your burning software. The below screen shots are of the two most popular brands that will guide you with these important settings.

Valid for: DN-D9000, DN-D6000, DN-D4000, DN-S5000, DN-S3000 & DN-S1000

Roxio – Easy Creator 5 (Select "Classic" for versions above 6)
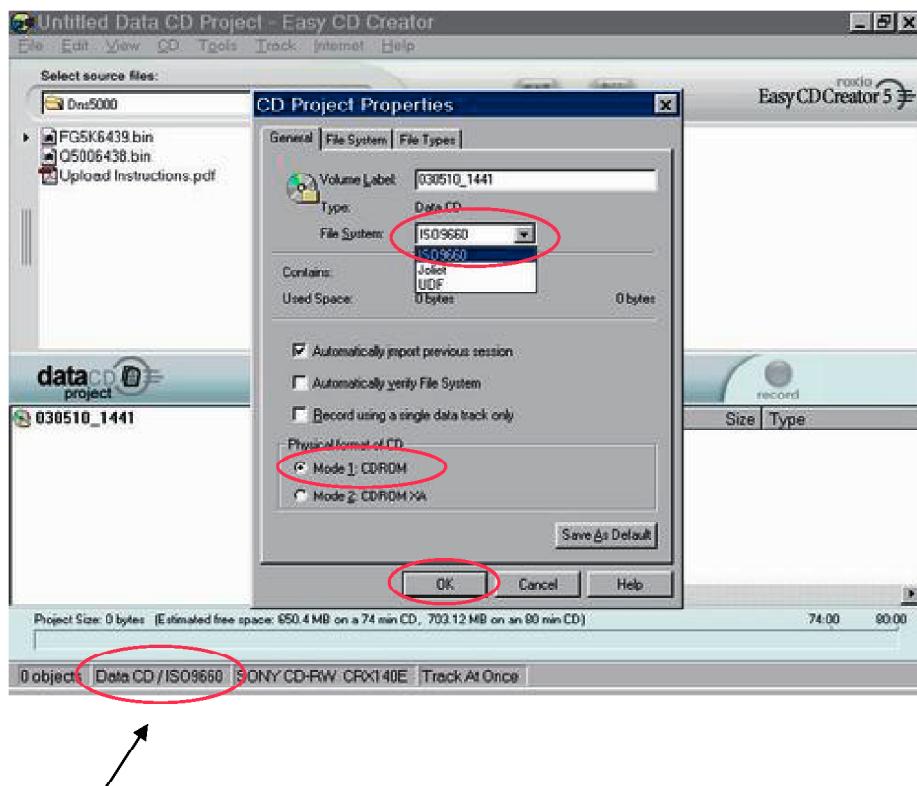
1. Double click on this setting to change your CD properties.

2. Select "ISO9660" circled in red

3. Select "Mode 1" circled in red

4. Select "OK" circled in red

5. Select the (1) required ".bin" file, then finalize at the slowest possible speed.

6. Read the step-by-step instructions included on page 2 & 3.

Ahead – Nero
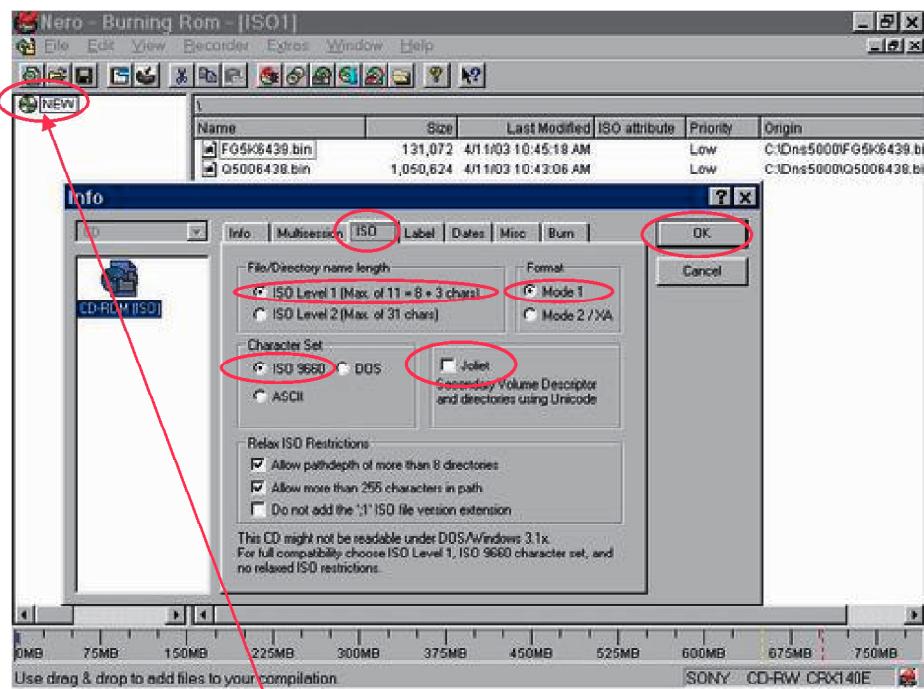
1. Right click on the "NEW" icon and select "Properties" in the drop down menu to change your CD properties. The Info box will then appear.

2. Select the "ISO" tab circled in red

3. Select "ISO Level 1" File/Directory name length circled in red

4. Select "Mode 1" Format circled in red

5. Select "ISO 9660" Character Set circled in red

6. Uncheck the "Joliet" box circled in red

7. Select "OK" circled in red

8. Select the (1) required ".bin" file, then finalize at the slowest possible speed

9. Read the step-by-step instructions included on page 2 & 3.

DENON

Professional Dual CD/MP3 Player

DN-D6000

Advanced Features
• MP3 Playback: fully supports,
- MP3 Seamless Looping w/B Point Trim
- MP3 Scratching
- MP3 Hot Starts- MP3 Effects
- C.B.R & V.B.R. encoding up to 320 kbps
- ID3 Tags, displays: (Title, Artist, Album)
- MP3 File Search System (locate your files by name fast and easy)

• **Next Track Function w/Cross Fade**
Storing hundreds of your favorite mp3's on one disc is great.
But what if you want play other files from the same disc back to
back? Well, with our world's first Next Track Reserve function,
you can search for a song by name and cross fade seamlessly to
that file for a smooth non-stop mix.
* The crossfade time is user adjustable.
** Also available for CD audio discs as well.

• **15 Second On-Board Sampler**, with edit options:
Pitch, B-Trim, Volume control, 3-Way playback (Loop/Single/All)

• **3-Way BPM Counter**
AUTO BPM, Manual TAP and Manual BPM value is also possible.

• **4 Built-in Effects**
You can activate the Effector function by selecting one of the 4
effects: Flanger, Filter (High-Mid-Low), Echo and worlds first
Echo/Loop.

• **3 Platter Effects**
Drag-Start, Brake & Reverse effects can be used for MP3 or CD
audio discs.

Other Features
• **New Quick Loading *Slot In* Drives**

• **Seamless Loop:** Two seamless loops are available. (CD or MP3)

• **Hot Start**
Two Hot Starts(A1 and A2) can be made on the fly and used as a
stutter point as well. (CD or MP3)

• **Loop End point B Trim/Move**
The B point for the seamless loop can be easily adjusted on-the-fly
using the Scratch Disc.

• **CD TEXT support** (with scrolling display for long names)

• **Power On Play**
Unattended playback is possible upon power up. Great for
restaurants, bars and nightclubs at opening time.

• **Relay Play**
Unattended playback is possible between both drives. Great for
cocktail hour or during dinner time at banquet halls.

• **CD Memo function**
Cue point, Playback Pitch & Range, Pitch ON/OFF, Key Adj ON/OFF,
and Seamless Loop A and B data can be stored for later recall.

• **70mm Jog Disc with:**
- Scratch Control
- Pitch Bend & Platter Hold
- Scan &Frame Search
- Customizable paper slipmats is possible under the removable clear
  scratch disc

• **Pitch Control**
* **CD:** ±4% (0.02% step), ±10% (0.1% step), ±16% (0.1% step),
±24% (0.1% step), ±50% (0.5% step), ±100% (1.0% step)

* **MP3:** ±4% (0.02% step), ±10% (0.1% step), ±16% (0.1% step)

• **Pitch Bend**
±32% (when variable pitch range is ±4, 10, 16 or 24%)
±99% (when variable pitch range is ±50,100%)

• **Key Adjust** (=Master Tempo): +100% / -99% max

• **EOM** (Flashes the status time bar when the track is about to
end)

• **Shock-Proof Memory:** 20 sec (CD), 100sec.(MP3)

• **Large Fluorescent Tube Display** with Dot Matrix text support

• **2-Way Fast Search/Manual Search** (buttons or jog disc)

• **Quick Jump:**
We made searching fast & easy. You can now jump around
within a track with precise user adjustable increment time steps.

• **Instant Start** (0.02sec)

• **CD-R/RW Disc Compatible**

• **Fader Start Control terminal** (compatible with all Denon DJ
mixers)

• **Digital Outputs**
Constant Digital Output at 44.1 kHz is present when using all
functions.

• **New remote control cable:** Our newly designed pin less cable
   is secured in place by its worry free self-locking ends.

• **Software Upgradeable** by CD-ROM disc

Design and specifications are subject to change without notice.

• Customizable Preset functions
1. AUTO CUE: ON*/OFF
2. NEXT TRACK FADE TIME: OFF/1/2*/3 sec.
3. SCRATCH STROKE: Short*/Long
4. SCRATCH DELAY TIME: OFF*/Delay1/Delay2/Delay3
5. JUMP TIME: 10*/20/30/60 sec.
6. PITCH RANGE: ±4/ ±10*/±16/±24 sec.
7. EOM : OFF/10*/15/20/30/60/90 sec.
8. TOTAL TIME DISPLAY: ON/OFF*
9. FADER: PLAY/CUE*/Play/Pause
10. POWER ON PLAY: ON/OFF*
11. PITCH: Pitch On*/Key adj On/Pitch Off
12. SINGLE/CONTINUOUS:
SINGLE/CONTINUOUS/SINGLE PLAY LOCK*
13. ELAPSED/REMAIN: ELAPSED*/REMAIN
14. RELAY MODE: Relay ON/Relay OFF*
15. MEMO ALL CLEAR: YES/NO*
16. VERSION DISPLAY
17. PRESET CLEAR: YES/NO*
* : Default

Specifications

Type	Dual CD/MP3 Player
Audio Channels	2 channels (Stereo)
Sampling Frequency	44.1 kHz (Normal Pitch)
Frequency Response	20 Hz - 20 kHz
Analog outputs	(1 kHz, 0 dB playback)
Total Harmonic Distortion	0.01%
S/N ratio	95 dB
Channel Separation	85 dB
Transfer and connector	Unbalanced, RCA connector
Output level	2.0 Vrms, 10 kohm
Digital output	
Transfer and connector	Coaxial
Signal format	SPDIF IEC958, Type II
Power supply	AC120 V, 60 Hz
Power Consumption	25 W
Dimensions	
Player unit	482 (W) x 88 (H) x 252 (D) mm
	19.0 (W) x 3.5 (H) x 9.9 (D) inch
Remote control unit (RC-D60)	482(W) x 132 (H) x 60 (D) mm
	19.0 (W) x 5.2 (H) x 2.4 (D) inch
Weight	
Player unit	6.3 kg, 13.9 lbs
Remote control unit	2.4 kg, 5..3 lbs
Standard Accessories	
Pin connected cord	2 pair
Remote connecting cable	1 pc (3 m, 9.84 ft)